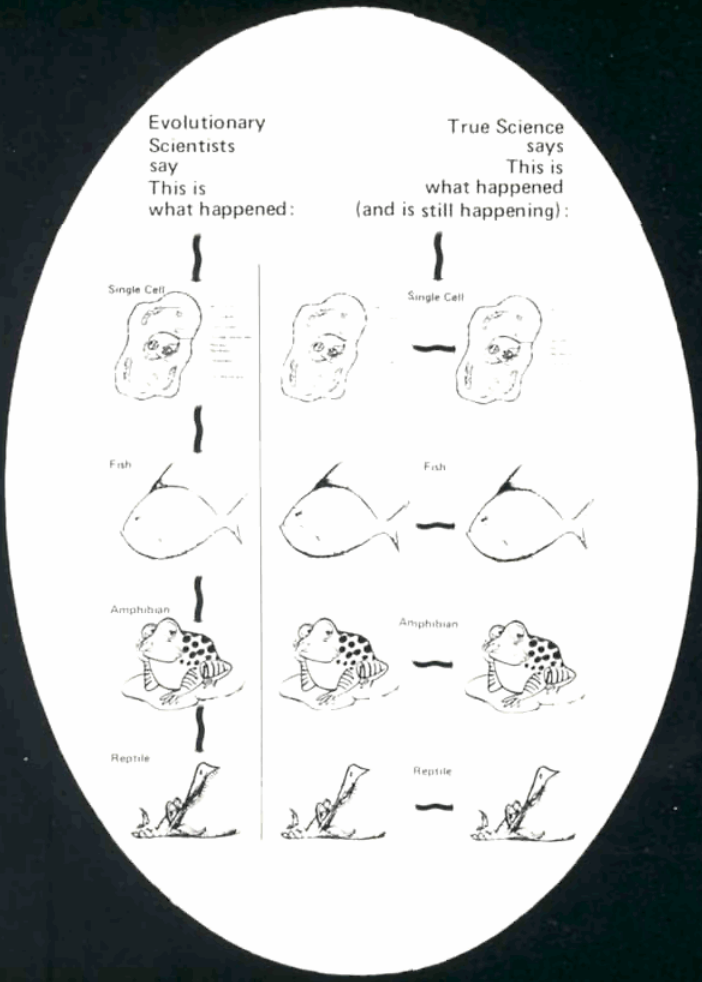
the Skeptical Inquirer

THE ZETETIC



Anti-Evolution Propaganda

Dowsing Tests / In Search of Delusion
Disciples of the Paranormal / Cayce's Failed Prophecies / The Niagara Caper

Published by the Committee for the Scientific Investigation of Claims of the Paranormal
VOL. IV NO. 1 FALL 1979

Editorial Board Martin Gardner
Ray Hyman
Philip J. Klass
Paul Kurtz
James Randi
Dennis Rawlins

Editor Kendrick Frazier

Assistant Editor Doris Hawley Doyle

Consulting Editors James E. Alcock
Isaac Asimov
William Sims Bainbridge
John Boardman
Milbourne Christopher
John R. Cole
Richard de Mille
Eric J. Dingwall
Christopher Evans
C. E. M. Hansel
Robert Sheaffer

Production Editor Betsy Offermann

Circulation Director Lynette Nisbet

Staff Mary Rose Hays
Kitty Turner

THE SKEPTICAL INQUIRER (formerly THE ZETETIC) is the official journal of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP, Inc.)

Manuscripts, letters, books for review, and editorial inquiries should be addressed to The Editor, THE SKEPTICAL INQUIRER, 3025 Palo Alto Dr., N.E., Albuquerque, New Mexico 87111.

Subscriptions, changes of address, and advertising should be addressed to: Executive Office, THE SKEPTICAL INQUIRER, 1203 Kensington Ave., Buffalo, New York 14215. Old address as well as new are necessary for change of subscriber's address, with six weeks advance notice.

Inquiries from the media about the work of the Committee for the Scientific Investigation of Claims of the Paranormal should be made to the Executive Office. Tel.: (716) 834-3223.

Copyright © 1979 by The Committee for the Scientific Investigation of Claims of the Paranormal, 1203 Kensington Ave., Buffalo, New York 14215. Application for permission to quote from this journal should be addressed to the Executive Office.

Subscription rates: Individuals, $15; libraries and institutions, $15; sustaining subscribers, $100 or more; back issues $5.00 each (vol. 1, no. 1, through vol. 2, no. 2, $7.50 each)

Postmaster: THE SKEPTICAL INQUIRER is published quarterly—Spring, Summer, Fall, and Winter—and printed at Artcraft-Burow, Buffalo, New York. Application to mail at second-class postage rates is pending at Buffalo, New York.

the Skeptical Inquirer
THE ZETETIC

Journal of the Committee for the Scientific Investigation of Claims of the Paranormal
Volume IV, No. 1 ISSN 0194-6730 Fall 1979

2 NEWS AND COMMENT
CSICP Appeals/Letter to NBC/Niagara Caper/Vallee sees conspiracy/ Taylor rides again/Race of giants/Mensa psychics/Protest proves principle/Cattle mutilations

13 PSYCHIC VIBRATIONS

ARTICLES

16 A Controlled Test of Dowsing Abilities, *by James Randi*
21 Science and Evolution in the Public Eye, *by Laurie R. Godfrey*
33 In Search of Delusion: Television Pseudodocumentaries, *by William Sims Bainbridge*
40 The New Disciples of the Paranormal: A Reply to John White, *by Paul Kurtz*
46 UFO or UAA: What's in a Name? *by Anthony Standen*
48 The Case of the Lost Panda, *by Hans van Kampen*
51 Edgar Cayce: The Slipping Prophet, *by James Randi*

BOOK REVIEWS

58 William A. Moore, *The Philadelphia Experiment: Project Invisibility* (Larry Kusche)
62 R. N. Giere, *Understanding Scientific Reasoning* (I. W. Kelly)

67 BASIC ANNOTATED BIBLIOGRAPHY

74 FROM OUR READERS
Letters from Wailes Gray, William George Sewell, Milton A. Rothman, George Kalishevich, Hilary Evans, Paul Kurtz, Ron Westrum, Philip J. Klass, John Barrett III, Gordon Stein

FEATURES

63 Some Recent Books 64 Articles of Note 80 Editor's Afterword

On the cover: Part of an anti-evolutionist "fact sheet" poster distributed by the Fair Education Foundation.

News and Comment

CSICP appeals ruling of FCC

The Committee for the Scientific Investigation of Claims of the Paranormal filed a petition on April 27, 1979, in the United States Court of Appeals for the District of Columbia, appealing the ruling of the Federal Communications Commission rejecting our complaint against NBC under the Fairness Doctrine. The complaint concerned the program "Exploring the Unknown," narrated by Burt Lancaster, which was aired on the network on November 8, 1977.

The Committee was represented by David S. Lichtenstein and the law firm of Rothwell, Cappello and Berndtson. The brief maintained that the program contained "controversial material of public importance" and that "NBC did not provide a reasonable opportunity to present contrasting views" as required by the Fairness Doctrine.

The petition especially focused on those segments of the program in which claims were made that so-called psychic powers could effect cures for people in need of medical attention or surgery and on those portions in which "psychic healing" or "psychic surgery" were performed.

The original complaint stated:

In one segment of the program people afflicted with cerebral palsy and other physical handicaps are brought into a so-called National Institute for Rehabilitation located in New Jersey. Their handicaps are purportedly relieved by devices which were developed on the basis of "technical information obtained psychically from the spirits of dead scientists and engineers." The narrator for the Institute states that "we are able to put to them (i.e., dead scientists) specific questions relating to any handicapped person and we get back from them specific information as to how to make a device which will solve the problem."

Burt Lancaster winds up this segment by stating, "Many of our ideas come from another dimension outside of ourselves—but, wherever it comes from is not so important; *what is important is that it is indeed science.*" (Emphasis supplied.)

In the psychic surgery segment, the alleged psychic surgeon claims to "x-ray" a patient merely by having him stand behind a sheet and then claims to remove the offending tissue. The surgery is presumably performed without anaesthetic. Although there are no apparent instruments employed, blood appears. Furthermore, no scar is evident after the operation, although some tissue would necessarily have to be removed in order to accomplish the purpose of an operation.

We submit that there is a critical public importance in issues involving the

An Open Letter to NBC-TV

I most strongly object to the style and content of "The Amazing World of Psychic Phenomena," shown on the NBC-TV network on Wednesday, January 17, 1979.

This program, packaged in pseudo-documentary form, presented an entirely biased presentation of so-called psychic phenomena. It is incredible to me that this presentation, which should more properly have been characterized as speculative fiction, was not even graced with a disclaimer. This omission is particularly vexing to me in light of the fact that much of the program consisted of dramatization of events which have been competently investigated and found to be clearly contaminated by fraud, or which are patently open to rational explanation.

Throughout this program no credible attempt was made to present any alternative explanation of the subject matter. Because of this serious omission, I feel that NBC should accept responsibility to provide equal promotion and equal air time for presentation of a serious scientific rebuttal.

My objection to this program goes beyond personal distaste: I teach psychology; my students come to college believing in astrology, reincarnation, Tarot cards, the "Bermuda Triangle," etc. These simplistic, antirational beliefs are seductive to uninformed minds because they offer attractively easy ways to "understand" complex phenomena. In this instance, your programming has served to reinforce such beliefs.

The slick documentary-like format of "The Amazing World of Psychic Phenomena," together with its total lack of objectivity, constitutes a serious disservice to the viewing public. In this production NBC has lent its prestige to the worst kind of mindless sensationalism and the callous exploitation of human gullibility. Your public deserved better.

Norman E. Tandy

This letter was originally written by Mr. Tandy, of Winchester, N.H., to the manager of his local NBC-TV affiliate, WBZ-TV in Boston. Mr. Tandy received, he says, a very bland and nonsubstantive response contending that a disclaimer was used and saying that contrary opinions (i.e., scientifically validated data) have been and will be given exposure by the station. "His response, of course," says Tandy, "misses the point that juxtaposition is critical in such matters. Unless more rational considerations are presented side by side with the 'psychic' message, those considerations will be lost for those who were drawn to the occult in the first place; that audience is not noted for being avid 'Nova' watchers." The CSICP has also complained to NBC about the program.—Eds.

health and welfare of people in need of medical attention. This had been recognized by the Federal Trade Commission in connection with psychic surgery. The Commission issued a cease and desist order on September 30, 1975, against advertising or promoting directly or indirectly "psychic surgery." An examination of the initial decision by the Administrative Law Judge discloses compelling evidence of the wholly fraudulent nature of "psychic surgery"...

The brief concluded:

> This is not a frivolous complaint. The controversy embodied therein reflects the deep and abiding concern of distinguished scientists throughout the country and in many of our leading academic institutions. These individuals, and many others, are extremely troubled by the increasing threat to modern science posed by the occult, pseudo-science and public expressions of irrationality. They are concerned that the cults of unreason are straining and exploiting public credulity. The recent tragedy in Guyana, where the cult leader Jim Jones practiced psychic surgery as an incident to mass suicide, bears eloquent testimony to these concerns.
>
> —*Paul Kurtz*

The Niagara Falls Caper

Pat St. John, a self-styled "psychic" from Bridgewater, Connecticut, predicted that a cataclysm would occur at Niagara Falls on July 22 at 4:56 P.M., overturning the Maid of the Mist excursion boat and killing all on board, including a group of deaf children.

This "psychic prediction" swept the media. It involved the U.S. Army Corps of Engineers, the Niagara Parks Commission, and tens of millions of people, all awaiting the supposed disaster.

Pat St. John (like a modern-day Saint Joan) blurted out a warning of impending disaster during a TV interview in Waterbury, Connecticut. It was the moderator, Joel Dobbins, who first released the story and gave Pat St. John credit for the psychic prediction. It was later picked up nationwide by the media and contributed to the growth of a kind of psychic hysteria in the area surrounding Niagara Falls.

What was not known by the public at the time was that the psychic vision allegedly came out of a seance in which nine people participated at the home of Pat St. John on June 9. The prophecy was supposedly "transmitted" piecemeal to four or five of those present by the "deceased relative" of one of the participants. The seance was conducted by Patricia Hayes, of the Arthur Ford International Academy of Mediumship.

Arthur Ford conducted the famous seance on Canadian TV a decade ago with Bishop James Pike. Ford allegedly put Pike in touch with his recently deceased son—by means of an "entity" named Fletcher. Pike believed that Ford had made contact with his son because facts were revealed about his personal life that were not commonly known. Allen Spraggett, moderator of the TV seance, reported in his book *Arthur Ford: The Man Who Talked With the Dead* that Ford gave instructions to his secretary to destroy all of his files after his death. However, some of the files survived. They showed that Ford had investigated the Pike family before the seance. He had apparently made a practice of collecting obituaries and other news stories and used private detectives to unearth little-known facts about his prospective clients. Allen Spraggett thought that Ford had some "psychic powers," but he also admitted that Ford cheated. Spraggett said that Patricia Hayes and her husband, Bud Hayes, were closely associated with Ford; and according to Pat St. John, Pat Hayes was Ford's secretary.

Pat St. John was flown into the Niagara Falls area for the "event" by the Buffalo ABC-TV affiliate. I phoned her at a local motel where she was staying. She readily volunteered to me that the Niagara Falls "vision" came out of the seance and that it had been led by Pat Hayes, though Pat St. John also informed me that she has *her own* "entity," who communicates information to her. When I asked her how she knew that it was reliable, she said that she knew he was present "because of the feeling of pressure above my ears." She admitted that she never before had made a prediction of a major event—the first was the Niagara Falls episode—but she was convinced that she used psychic powers in her personal life.

I phoned Pat Hayes in Miami, Florida. Mrs. Hayes confirmed the fact that it was she who had conducted the seance and that, although Pat St. John was given credit for it, it was another "entity" who spoke through Pat Hayes concerning the prophecy. As nearly as I could gather—although they wanted publicity for the Academy —they never expected the Niagara Falls prediction to balloon the way it did.

I questioned Bud Hayes about the Academy. He said that its purpose was to teach people to develop "psychic awareness." One three-day session was supposed to train people to become mediums so that they could contact dead persons. Each trainee pays $250 for the course. Hayes said that he was not claiming that they made contact, but that the people who participated in the seances at least "felt satisfied."

I tried to get Pat St. John (new to the Academy and recently appointed its Northeast Director) and Pat Hayes to give me the names and addresses of the other individuals at the seance so that I could corroborate what occurred. Both declined to do so.

The fact that so much credence was placed in the Niagara Falls prediction was no doubt due to the fact that a sensor implanted in the ground at Terrapin Point on the American side of the Horseshoe Falls set off an alarm on July 13—ten days before the alleged event was to occur.

Now it is common knowledge that Niagara Falls is eroding and that there have been numerous rockslides over the years, but this was the first time that the alarm had been triggered—indicating that the rocks at Terrapin Point had moved a quarter of an inch. I questioned the people at the U.S. Army Corps of Engineers, and they maintained that the rocks could have moved a quarter of an inch gradually or at any time during the five years that the sensors have been embedded. Indeed, the Corps of Engineers has known, and warned the Parks Commission, that Terrapin Point was dangerous. One need not be a psychic to predict that rocks will continue to fall. However, the "entity" at the seance did not specify Terrapin Point as the cause of the disaster. Pat St. John's original recorded prediction was that a breakwater or dam would burst above the falls.

Mrs. St. John called me after our first conversation to complain that I had called her "self-deluded" in an interview in a Waterbury newspaper. I asked her what she would do when 4:56 P.M. on July 22 passed and nothing had happened. She replied that she was absolutely certain that the disaster would occur as predicted and that many would be killed. She also said that her "entity" told her that there would be still another disaster in Western New York in the next month and a half "endangering the lives of millions of people." I replied that I thought that she was out of touch with reality.

She asked me, in turn, what I would do if the Niagara Falls disaster occurred as predicted. I replied that it was highly improbable and that, in any case, I planned to be on the Maid of the Mist at that time. I went on the cruise at the appointed hour to prove a point. But I was surprised to see that almost 100 representatives of the press were also present, many of them half in fun, others apprehensive because the psychic hysteria surrounding the event led them to believe that Niagara Falls might tumble down on them.

Pat St. John has since fudged on her prediction by claiming that the event would still happen at 4:56 P.M. but that it would be on another day. Her new prediction is about as clairvoyant as predicting that California will experience an earthquake or that there will be a tidal wave somewhere. These events are likely to happen, and some psychics somewhere will no doubt take credit for predicting them. Fortunately, since Pat St. John is not a professional, her prediction was so specific that it could be easily exposed.

Whether the public or the media have learned anything from this caper is hard to say—during the week following this nonevent Niagara Falls was host to a "Psychic Fair," similar to many others held all over North America, and the public flocked in large numbers to sample its wares.

—*P.K.*

Vallee calls skeptics a front for government deception

Jacques Vallee, the French-born computer scientist who has long been one of the most influential proponents of the reality of UFOs, has espoused a number of different ideas in the past dozen or so years. His first two books, *Anatomy of a Phenomenon* (1965) and *Challenge to Science* (1966), suggest that UFOs are the product of some alien intelligence, possibly, although not necessarily, extraterrestrial. In *Passport to Magonia* (1969) Vallee notes the similarity between sightings of UFO occupants and sightings of fairies, arguing that, whatever the cause of each may be, they represent the same basic phenomenon. In *The Edge of Reality* (1975), coauthored with J. Allen Hynek, Vallee argues that no solution to the UFO phenomenon is possible except in the context of the solution of encounters with the "Men in Black," the "Red and Black Men," "Elementals," and the spoon-bending of Uri Geller. In *The Invisible College* (1975), Vallee relegates the truth about UFOs into the realm of "meta-logic," proclaiming UFOs to be a "myth" that is "truer than true."

Vallee's latest book, *Messengers of Deception* (And/Or Press, Berkeley, Calif., 1979), takes off in a totally new direction. The UFO phenomenon is in a sense very *real*, says he, but it is the result of deliberate human deception, perpetrated by some unknown clandestine organization (very likely answerable only to top government officials) for unknown political reasons. Perhaps the intention is to unite mankind, he speculates, by raising the specter of a fraudulent but convincing threat from outer space. The major governments of the world may be cooperating in this deception, as did the U.S., Great Britain, and the Soviet Union in the deceptions required to mislead the Axis powers during World War II.

One of the implications of this hypothesis is that many UFO researchers, including prominent UFO skeptics, are either the knowing collaborators of the clandestine Messengers of Deception or "useful idiots" duped into doing the work of these agents. Some of the "links" between UFO groups and espionage or military intelligence Vallee proclaims to be "open and obvious":

"The Board of Directors of NICAP lists among its members the former head of the CIA; and it is no secret that CUFOS [Dr. J. Allen Hynek's Center for UFO Studies] has several 'former' agents among its associates." (Of course, if the CIA really *were* involved up to its ears in some massive UFO deception, no former head of that agency would ever be so stupid as to permit his name to appear as a member of the Board of Directors of a major UFO organization.) The CUFOS accusation, which Vallee does not substantiate in any way, has severely strained his long-standing friendship and collaboration with Hynek. "I certainly must be naive," Hynek wrote in the May issue of *Second Look*, plainly quite upset. "I don't recognize any [agents].... If I am unaware of all this dark web around me then I am the best little manipulatee in all of UFOlogy." In fairness to Hynek, I must state that I have spoken with a number of individuals who have serious axes to grind with Hynek and CUFOS, owing to the ceaseless quarrels between rival UFO organizations; yet Vallee is thus far the only source I have heard charging that CUFOS is the tool of spooks and moles.

Another group singled out as a front for manipulators (although its name is not directly mentioned) is the Committee for the Scientific Investigation of Claims of the Paranormal. Plainly referring to the CSICP, Vallee writes: "The action of the more vocal skeptics would be explained by such an hypothesis [clandestine deception]. The greatest danger a deception scheme would run would be exposure by qualified scientists who were seriously and critically examining UFO evidence. What if they discovered that the phenomenon was entirely simulated by human trickery? To prevent such a scientific study from being organized, all that is needed is to maintain a certain threshold of ridicule around the phenomenon. This can be done easily enough by a few influential science writers, under the guise of 'humanism' or 'rationalism.' UFO research would be equated with 'false science,' thus creating an atmosphere of guilt by association which would be deadly to any independent scientist. If the believers' groups are manipulated, the skeptics can also be manipulated in the same way. I propose that the more dedicated investigators take time away from their endless UFO chases and look into the backgrounds, connections, and motivations of the more vocal 'skeptics' for clues to such influence." The editorial committees of skeptical organizations and magazines "include people who may have links to intelligence agencies and to various occult and political organizations," Vallee states. He suggests, however, that these alleged "links" can be discovered only "by someone who has spent time looking behind the scene." As one whom Vallee presumably includes in that group of skeptics bent on deception, and who personally knows virtually everyone else who is, I now realize as never before the utter lack of substance of the "celebrated" Vallee's brilliant hypotheses.

Vallee's newest approach to the UFO question seems to be exceedingly paradoxical. On one hand, he clearly recognizes the dangers inherent in the current resurgence of irrationalism. "Intellectual abdication," Vallee rightly terms it. "It makes the believers dependent on outside forces and discourages personal responsibility: Why should we worry about the problems around us if the Gods from Outer Space are about to solve them?... What prevents these [UFO cultists] from running a really powerful movement? Simply the fact that too few people believe that the contact with Space People is actually possible... It is not difficult to imagine a

combination of economic and social circumstances under which contactee groups could capitalize on the public's fear... The idea that leaders of a society have received their legitimacy from higher levels, rather than from the people, is fundamental to authoritarian forms of government."

It is astonishing to find Vallee among those concerned about the recent dramatic rise in irrationality; I had always assumed that he felt himself to have more in common with the irrationalists' position. Surely one who prattles on about "meta-logic" hardly sounds as if he feels irrationality to be nearly as much a threat as cold, hard science.

But just as one is tempted to conclude that Vallee is finally becoming sensible as he approaches 40, one comes across statements that clearly show he has not *abandoned* the path of irrationalism but has merely traded one absurdity for another. The methods allegedly used by the supposed deceptors to simulate UFO phenomena are described as "psychotronic." For those who, like myself, have no idea at all what this is supposed to mean, he refers to "that emerging set of techniques the U.S. calls parapsychology and the Soviets psychotronics." In other words, the CIA, or some similar secretive organization, is supposed to be using astonishing ESP powers to create fraudulent and absurd visions of UFOs that don't exist! That seems to place Vallee in very much the same position as the old lady in the song who swallowed a fly—and then swallowed a spider to catch the fly. She soon found to her dismay that she had to swallow a frog to catch the spider, and on and on. One cannot solve the problem of the absurdity of UFO reports one has swallowed by swallowing an even greater absurdity and then calling out, "Deception!" We might carry the argument one step further and claim that parapsychology is a huge deception perpetrated by an underground race of super beings who inhabit the inside of a hollow earth; they make us think that both Uri Geller and the CIA are real, when in fact they're not.

Among the best "evidence" Vallee cites for his ESP deception hypothesis are the "remote viewing" experiments of the SRI International's Targ and Puthoff. Yet the credibility of this type of "classic" ESP experiment has been seriously undermined (*SI*, Winter 1978), as Vallee should know.

As recently as 1975, in *The Invisible College*, Vallee stated that he no longer believed that "the organizations responsible for our collective security were secretly conducting a large-scale, quiet, and competent investigation into the nature of the paranormal phenomena that are manifested around us." In 1979, in *Messengers of Deception*, he once again most emphatically does.

For the past dozen years, Vallee has been in the forefront of most major avant-garde fads and fashions in the UFO movement. The past few years have seen a dramatic resurgence of previously discredited ideas of massive intelligence-agency cover-ups of UFO facts, including the existence of crashed saucers, whose alien occupants are preserved in pickle jars at some secret government facility. (Ask Woodward or Bernstein how long such a spectacular cover-up could be maintained.) At least some of Vallee's current thinking resonates with the paranoia implicit in these government-conspiracy fantasies. If the UFO crowd chooses to jump onto Vallee's latest circus train, the next few years could see a greater number of exciting spy stories circulating in "scientific" UFO circles than in all of the novels of Ian Fleming.

—*Robert Sheaffer*

Taylor rides again

Mathematical physicist John G. Taylor, of Kings College, has published a

second paper in *Nature* demonstrating the remarkable reversal of his previously pro-paranormal views. The paper, entitled "Is There Any Scientific Explanation of the Paranormal?" (*Nature*, 279, June 14, 1979, pp. 631-633), answers that question in the negative. It follows up on his previous paper (see *SI*, Spring 1979, p. 3) on the absence of significant electromagnetic signals at the time of supposedly paranormal endeavors around subjects under instrumentation.

This second paper examines proposed explanations for alleged paranormal phenomena in the light of modern science and finds no support for them. "Taken together," Taylor and his colleague E. Balanovski say, "the two papers are a strong argument against the validity of the paranormal." Their final sentence sums up the new Taylor view nicely: "We can only conclude that the existence of any of the psychic phenomena we have considered is very doubtful."

—*K.F.*

"Race of giants" poppycock

Editor's note: This letter was written by H. P. Zuidema to the editor of Parade *magazine, Jess Gorkin, in response to an article by Brad Steiger, in its May 20, 1979, issue, entitled "Big Foot's Ancestors" and subtitled "Was our continent once inhabited by a race of giants? Some evidence supports the theory."*

You have been "had," and in the process have done a great disservice to the readers of the 111 newspapers using *Parade*.

I refer to the May 20 story "Big Foot's Ancestors."

The "man's footprints, 17 inches long," shown with "Dr." Clifford Burdick, are fakes. Thirty years ago, as the writer of the article would have learned if he had done his research, Dr. Roland T. Bird, of the American Museum of Natural History, saw one of these "prints" in a curio shop in Gallup, N.M., and, interested from the scientific point of view, traced the source to the Paluxy River in Texas.

He did a great deal of excavating, found numerous dinosaur tracks (you can see them on the lawn at Central Park West and 79th Street) but no human tracks. He did learn that during the Depression, the folks in the area did some chiseling and fabricated tracks to sell to tourists.

Just recently a group of professors from four sectarian colleges made their own investigation on the scene and came up with the same answers.

If you don't want to take my word for it, get in touch with Dr. Wann Langston, of the Texas Memorial Museum (University of Texas, Austin) and ask him why Burdick and others involved in the "discovery" never had paleontologists examine the tracks. Incidentally, the Burdick people used the novel method of comparing the tracks with the plaster footcasts of a Chicago sideshow giant. I don't think they quite fit.

I exposed the fakery in *Liberty* (Sept.-Oct. 1975) and there was no reply from Burdick.

Your writer could have checked Burdick's academic qualifications. I know him as a kind of religious fanatic who has at times taken tourists to find the Ark, and if drillers had followed his ideas gained after an "exploration" in Wyoming and Utah on which he reported they would have missed finding a new oil and gas field.

The writer's conclusion that "skeletal remains of men and women from an unknown race of giants has thrown a monkey wrench into accepted ideas of evolution" would be recognized as poppycock by any moderately intelligent high school student.

Henry P. Zuidema
Homestead, Fla.

Mensan psychic groups

The Mensa society, the organization of high-I.Q. folks, has recently generated considerable interest in supposed psychic abilities within its membership, and two spin-off groups on opposite sides of the issue have been formed.

First came the Psychic Science Special Interest Group, Inc., a nonprofit group affiliated with American Mensa Ltd. "for the purpose of promoting awareness of the psychic as a mind-related phenomenon." Although formed four years ago, it has recently greatly expanded its scope and now puts the major emphasis of its activities on its monthly publication, *PSI M.* Its president, Richard A. Strong, a retired Air Force major from Dayton, Ohio, says his group has about 200 members and "we estimate that about four times that number of Mensans have a keen interest in the psychic." (There are about 30,000 members of the Mensa organization, all of whom have scored within the top two percent on an accepted I.Q. test.) "As you can see," says Strong, "there are some folks of high intelligence who take it [the subject of psychic abilities] seriously."

On the skeptical side, an organization called the Anti-Sophistry Special Interest Group was created earlier this year as an autonomous group within the Mensa society. Its founder, Laird M. Wilcox, notes the interest "in psychic and occult stuff" within Mensa and laments that its adherents' high I.Q.'s don't make them immune from the same traps others have fallen into. "The purpose of my Special Interest Group is to do much the same thing that the CSICP is doing, only within the Mensa society," says Wilcox. His group is now listed in Mensa's directory of special interest groups "and I have had many inquiries." The anti-sophistry group's first publication is "Astrology, Mysticism and the Occult: A Critical Bibliography," an up-to-date bibliography of works that critically analyze occult claims. It is available from Wilcox for $1 (to cover costs) at P.O. Box 1832, Kansas City, MO 64141.

—*K. F.*

Protest proves principle

The UFO wave that swept over several countries from December 1978 to January 1979 had an interesting complication in the Netherlands. The worldwide upswing in the number of UFO reports apparently was caused by a conjunction of circumstances: atmospheric conditions (New Zealand), the passage of Skylab and Salyut-6 (Europe), the decay of a Russian rocket (Germany, Holland, and Great Britain), and the bright morning star Venus. Nevertheless, news reports of these "UFOs" were highly suggestive.

In the Netherlands even the well-respected *Elseviers* magazine, a prominent newsweekly, gave the "UFOs" wide berth by devoting two full pages of the January 13, 1979, issue to that subject. A Dutch UFOlogist was interviewed for an article called "Modern Life." This UFOlogist was a Mr. Douwe Bosga, who claimed in the article to have "studied a year at the American Center for UFO Studies." According to Mr. Bosga, Dutch UFOlogists receive a number of UFO reports every month "of which 9 or 10 can be explained. However we are interested in the 5 of 100 reports that cannot be explained." I find these numbers difficult to explain.

"The phenomena become stranger and stranger," said Bosga. "They may have a religious nature, goblins . . . Also they may be astral bodies, the out-of-body travelers. People have embarked UFOs that way!" Bosga is a member of the Dutch UFO club NOBOVO.

NOBOVO wants to be an affiliate of the Center for UFO Studies (CUFOS), in Illinois, and says it has a special interest in persons who claim to have had contact with outer-space beings. According to the article, Bosga hypnotized people at CUFOS and got them talking about their experiences aboard space and other unearthly craft. Bosga continued: "It is now definitely established that those people firmly believe in what they say. Many descriptions, independently of each other, are identical. On the basis of these accounts a uniform description could be constructed of a being, the standard humanoid." A few lines further on he says: "Those little green men do not occur in these descriptions." It is also stated that his interest is not only in UFOs but also in goblins and the supernatural.

All this was too much for me, a skeptic in the field of UFO research after many years of thorough investigation and the Dutch correspondent of the CSICP's UFO Subcommittee. I lodged a complaint against *Elseviers*, accusing the magazine of poor journalism and exposing most of the guesses and claims made by Bosga. However, under Dutch law, the publisher could not be forced to rectify the situation. Nevertheless the editors replied to my complaint in a personal letter (dated January 24, 1979), stating that the article had been based upon data provided by Mr. Bosga and by NOBOVO, the latter being an institution "generally accepted to be trustworthy and authoritative." The editors wanted a Dutch view on the recent UFO flurry but admitted honestly that their published view clearly appeared to be very doubtful!

The magazine's handling of my complaint confirmed Philip J. Klass's "UFOlogical Principle 4," as quoted from his book *UFOs Explained*: "News media that give great prominence to a UFO report when it is first received, subsequently devote little if any space or time for reporting a prosaic explanation for the case when all the facts are uncovered." Therefore the readers of *Elseviers* magazine were left with distorted, sensationalized information about UFOs. It remains a pity that some media devote so much time and space to advertising the nonsensical without feeling responsible for providing well-balanced information for the education of their clientele.

—Hans van Kampen

Cattle mutilations in New Mexico

The strange subject of cattle mutilations, familiar to many states of the western plains and Rocky Mountain regions in recent years, has now come under the scrutiny of a federally supported, multi-agency investigation in New Mexico. This arrangement followed the first-ever federal hearing on the cattle-mutilation problem, held in Albuquerque this past spring under the joint sponsorship of U.S. Senator Harrison Schmitt, a New Mexico Republican, and the U.S. Attorney's Office in Albuquerque.

For a while the hearing itself threatened to become even more bizarre than the subject under investigation. Apparently the only requirement for being included on the agenda was to have requested to speak, and most of the first two hours of the April 20 hearing was devoted to a succession of proponents of UFOs and paranormal world-views taking advantage of the occasion to advance their theories of extraterrestrial visitations. Eventually, the tone shifted somewhat, with several afflicted ranchers, Indian leaders, and state police investigators expressing their concern about the loss of livestock, the often unusual circum-

stances of the crimes, and the lack of suspects. The hearing ended on a sober note with a hard-nosed appraisal by the head of a Colorado Bureau of Investigation study of cattle mutilations in that state. The CBI's Carl W. Whiteside cautioned that investigations need to be based on facts and evidence, not hypotheses, and that even a sophisticated, professionally conducted investigation might not resolve the mystery.

The CBI investigation in Colorado involved both field and laboratory autopsies of allegedly mutilated animals, identification of all helicopters and logs of all helicopter flights in the state, undercover investigations into satanic witchcraft claims, and coordination with police, the Department of Interior, Colorado-based military units, and universities. Still, says Whiteside, there were no positive results. He said the investigation did confirm that *some* mutilations had occurred. More than 200 cases of alleged mutilations were investigated. In 19 instances, circumstances enabled carcasses to be examined by specialists at Colorado State University's School of Veterinary Medicine. Nine of the 19 were found to have been willfully mutilated with sharp instruments. Thus, although predator attacks and natural deaths, combined with collective delusions or hysteria, can account for many of the reported instances (see our Spring/Summer 1977 issue), some mutilations by sharp instruments have been documented.

During the hearing it was announced that, for the first time in the United States, the FBI would become involved in cattle-mutilation investigations, an act authorized by the Justice Department at Schmitt's instigation on the basis that several mutilation killings in New Mexico have occurred on Indian lands.

In their statements, Schmitt and the federal law-enforcement officials treated the subject as a criminal matter with potentially serious economic consequences for ranchers. They made no references to the attempts to link the subject with UFOs or paranormal events in general. In fact, in a news conference afterward, Schmitt, a Ph.D. geologist and former Apollo 17 astronaut, discounted the UFO hypothesis. He suggested quite reasonably that probably no single factor, but a variety of causes, is responsible for cattle-mutilation reports. What is necessary, he said, is a good scientific investigation, a lot of common sense, and systematic collection of data.

A week after the hearing, Kenneth M. Rommel, a 28-year veteran of the FBI, now retiring, was named by the Santa Fe District Attorney's office to coordinate a statewide investigation funded in part by a $44,170 grant from the federal Law Enforcement Assistance Administration. (In mid-August, the governor's office reported that the investigation was going well and that, according to Rommel, all animals examined since the study began had died from natural causes or from normal predatory attacks.)

So the cattle-mutilation problem in New Mexico is now under coordinated criminal investigation, the first one involving federal agencies and federal money. Most officials seem content to regard the mutilations as straightforward, if rather exotic, criminal acts. Nevertheless proponents of the paranormal continue to suggest extraterrestrial or supernatural links, which is hardly surprising, since public interest is high, facts are few, and until the mystery is solved no claims, no matter how extreme, can be disproved. It's another no-lose situation for the occultists.

—Kendrick Frazier

Psychic Vibrations

In 1975, John Brent Musgrave, of Edmonton, Alberta, received a $6,000 grant from an agency of the Canadian government to support his research into UFO sightings in Canada. His work has now been completed, and the Canadian taxpayer at long last has a chance to see the invaluable research that his hard-earned tax dollars have made possible. Musgrave's slim book is titled *UFO Occupants and Critters*, published by UFO exploiter and pornographic movie reviewer Timothy Green Beckley's Global Communications in New York ("Shocking Discovery! Alien Artifact Found at UFO Crash Site"; "The Incredible Man Who Speaks with Space Beings."). Musgrave has compiled a "Catalogue of Occupants and Critters," showing that, while Close Encounter sightings fall into just three kinds, no fewer than eight types are required to describe the behavior of "UFO critters." The first few types—fly-by, stroller, and tourist—are not nearly as interesting as the later ones: peeping toms and molesters. Some typical entries in the catalog: "#38: 12 AUG 1967, late evening. Dozens of teenagers claim they saw a 'huge black monster' descend from a lighted craft near Richibucto, New Brunswick. The figure was dressed in black, with black face and goggles." "#42: 17 SEPT 1967, 02:00. Eight-foot-tall 'space man' observed near Langley, British Columbia. Pink-coloured with scaly skin." The U.S. Treasury has not, as yet, been successfully raided to produce such gems as this. We wonder if there exists a Canadian counterpart of Senator Proxmire to present a well-deserved Golden Fleece Award?

* * * * *

The Tamara Rand Institute, a "psychic" organization in Las Vegas, published the following item in a local newspaper: "Due to unforeseen circumstances we must postpone the Psychic Fair scheduled for Saturday, March 24, 1979, and Sunday, March 25, 1979." How in the world could *that* happen?

* * * * *

Some of us, watching NBC-TV's recently dropped series *Project UFO*, wondered how they had the gall to claim that the fantasies they were peddling were "inspired by official reports of claims of reported sightings of unidentified flying objects on file in the National Archives of the United States." Even many who argue for the reality of UFOs freely conceded the gross inaccuracies and dramatic license in that supposedly fact-based series. In an interview in the movie/TV fan mag-

azine *Rona Barrett's Hollywood*, Edward Winters, one of the stars of the series, explained how the writers for *Project UFO* got their material: "As I understand the story, the Air Force finally got tired of looking at us, because they said, 'Anything your writers can dream up, we can find.... There are over 12,000 cases in the Blue Book report.' So instead of finding it first and then writing about it, they let the writers write it and *then* they go find one like it!" While this does indeed *sound* perfectly logical, we can't help but feel that, were it reduced to syllogistic form, it would not hold water.

* * * * *

The "scientific evidence" of reincarnation continues to mount. The *National Enquirer* reports that a "top parapsychologist," Dr. Ian Stevenson, writes in the medical publication *Journal of Nervous and Mental Disease* that "parents of identical twins sometimes report that they observed such marked differences in behavior at such an early age that it does not seem likely they themselves (the parents) could have brought it about. I am suggesting that some such differences may derive from the different experiences in previous incarnations." In a similar vein, another national tabloid, *Midnight/Globe*, asks, "Is this baby *Elvis reincarnated*?" It cites an impressive list of astonishing and inexplicable coincidences: "Baby Elvis was born at 4:30 AM—the same time Elvis died"; "The infant was born with deep, dark sideburns and the curled lip that was Elvis's trademark even as a child"; "The doctor says Baby Elvis was conceived on January 8—the King's birthday." Young Elvis's mother, Debbie Patterson, explains that "it was by Elvis's grave that my husband and I decided to name our child after him." Any music but Elvis's, she reports, makes the baby cry. What further proof could be needed? Fans of the late Elvis Presley are said to be flocking to Asheboro, North Carolina, to catch a glimpse of Baby Elvis. Little Elvis Presley Patterson now has his own fan club, with posters and T-shirts—all by the age of five months. That little kid darn well better learn to play the guitar.

* * * * *

Recent developments in Bigfoot circles suggest that rival monster-hunters hate each other at least as much as rival UFO groups. According to a story from the Associated Press, Rene Dahinden, of Richmond, British Columbia, has an ongoing feud with Jon Beckjord of Seattle. Mr. B. claims to have seen Bigfoot, Mr. D. does not. D wants to shoot and kill Bigfoot, which horrifies B, who says: "It might be the missing link. We may have a better chance of communicating with this animal than with any other." At present, Dahinden threatens Beckjord with legal action over the showing of a famous film of a supposed Bigfoot, which Dr. Sydney Anderson of the American Museum of Natural History in New York calls "a man in a monkey suit." Meanwhile, Bigfoot-hunter Peter Byrne, of Hood, Oregon, has signed a warrant against Dahinden to keep him out of Oregon, charging that he interferes with his work there. Elsewhere, Dr. Grover Krantz, a physical anthropologist at Washington State University in Pullman, sometimes drives the back roads at night with a rifle by his side, which Beckjord finds both repellent and useless, since Indian lore plainly states that Bigfoot cannot be killed. Dr. Marjorie Halperin, an anthropologist at the University of British Columbia at Vancouver, attempted to get all factions together for a rational, scientific discussion of the Bigfoot question. It turned into a fiasco. The Bigfoot-hunters showed little inter-

est in such papers as "The Wild Man in Medieval Irish Gaelic Literature," while the professors of English cared little for reports of modern-day Close Encounters. Beckjord and Dahinden got into a "shoving match," and Byrne showed up with his own film crew, prompting Dahinden to threaten to walk out, along with his followers, unless the film crew departed forthwith. Science marches onward.

* * * * *

As a public service to our readers, we reprint the following self-improvement information from *UFO Review*, to assist each and every one of you in achieving his or her maximum Karmic potential: (1) "SHE'S 'TUNED IN' TO 'HIGHER FORCES' AND WANTS TO HELP YOU! Having problems of any kind? Carol Rodriguez is a gifted young psychic who would like to help. She is not motivated by money, but is seeking to help all those in need... Send $15.00 to: Ms. Carol Rodriguez, 40-07 75th Street, Elmhurst, NY 11373." (2) "Bob Short has agreed to act as a channel to receive information maintained about each of us and kept secret in an automated computerized system of brainwave records stored on the planet we call Jupiter... Send $42 and receive a full 45-minute casette tape recorded especially for your ears only while Bob is in a trance-like state. If you wish to know about past lives, the 'Space Brothers,' through Bob, will reveal this information. You must limit this discussion to 1 or 2 incarnations... Send payment to Outer Space Communications, c/o UFO Review, 303 Fifth Ave. (Suite 1306), New York, NY 10016." Unfortunately, satisfaction can *not* be guaranteed, since we have not yet succeeded in recovering money that has been wired to another planet. •

A Controlled Test of Dowsing Abilities

James Randi

When a series of five one-hour television documentaries, *Indagine sulla Parapsicologia* (Inquiry into Parapsychology), was released in Italy in 1978, there was a storm of protest. Singled out for large amounts of crank mail and press censure was Piero Angela, Italy's best-known TV journalist, who had hosted, and indeed conceived, the program series. Angela had begun his investigation with an open mind, but he was soon soured by the discovery that most of the parapsychologists he interviewed throughout Europe, the United States, and South America either had no good evidence to show him or would not answer direct questions about their work. The TV series concluded that there was no basis for a belief in the paranormal.

Italy is quite dedicated to belief in such matters. Numerous organizations rose to criticize Angela and RAI-TV, the producers of the documentary, and the fire was further fanned by publication of Angela's book *Viaggio nel Mondo del Paranormale* (Journey in the World of the Paranormal). My personal offer of $10,000 to anyone performing a paranormal feat under proper observing and control conditions was outlined both in the TV program and in the book. Immediately, applicants began to register their desire to claim the reward.

I delegated Piero Angela to handle the preliminaries for me by asking that all applicants sign an agreement saying (a) that they could perform in the presence of a skeptic, and (b) that they would pay their own travel costs to visit Rome to be tested. By this means, most of them were eliminated. But some 40 remained who were willing to be tested; and RAI-TV arranged, in return for the filming rights of the event, to pay my travel and living expenses during the tests, which were held from March 22 to March 31, 1979. I visited there in the company of a colleague, William Rodriguez, who assisted with the supervision of the controls.

The list had dwindled to 11 by the time we arrived. Of these, only 9 eventually showed up, and of that small number, four were dowsers, claiming the ability to find water using various devices. This article will deal exclusively with those individuals, leaving the table-tippers, ESP

James Randi is a professional magician, a member of the executive Committee of CSICP, and a well-known investigator of "psychics."

---

artists, and others to a future writing.

The TV people had arranged for a location some 30 miles outside of Rome, near the town of Formello. I had prepared a guarded plan (see Figure 1) of a set of three pipe-patterns that were to be laid out and then covered with 50 centimeters (20 inches) of earth, within a plot measuring 10 meters square (33' × 33'). A set of carefully explicit rules was written up that had to be agreed to by the dowsers in advance of their participation. There were three days of haggling over conditions, each performer having his own variations, but eventually everything was resolved.

It was required that each dowser agree that (1) he felt able to perform that day under the stipulated conditions; (2) he was able to find water flowing at a minimum rate of 5 liters a second in a pipe 8 cm in diameter buried under 50 cm of earth; (3) the presence of skeptical persons and TV cameras with other electrical equipment was not a negative factor; (4) he would scan the area for any natural streams running underground before beginning the test, thus eliminating any possible interference with the test itself; (5) he would demonstrate the detection of running water in the exposed section of the pipe, while water flowed in it, as a preliminary; (6) detection of running water in the correct path was to be the goal of the tests, and rationalizations or excuses would not be acceptable; (7) the performer would place between 10 and 100 pegs along the path he found, each peg to be placed within an area 20 cm (8 inches) wide, centered on the actual pipe; the contestant must have at least two-thirds of the pegs on any path placed within these limits, and must succeed in doing this in two out of three tests.

I agreed to give the check for $10,000—which was placed in the hands of the presiding lawyer—to any contestant who met these conditions.

After numerous delays (hailstorms and such) the tests finally got under way. The first testee, Giorgio Fontana, had shown us the night before his uncanny ability to dowse atlas maps, and we were treated to a confidential demonstration that revealed a vast river of crude oil that flowed underground from Greenland, past England, across France and Italy to Tunisia. There, Fontana told us, we were being robbed by the Tunisians who tapped off all that oil.

Fontana's dowsing tool was a pendulum. Popular as a "psychic tool," in France in particular, such a device is simply a string or chain with a weight on it. Fontana rushed about waggling his pendulum over the ground, pointing where he wanted pegs placed by the surveyor. (See Figure 2.) As determined by random selection, path C had been used first. Fontana pegged out a path that ran almost straight from the inlet valves to the reservoir, which closely approximated actual pipe B! I had used this one optimally simple and direct route on a whim, to show that the shortest distance between the two points could not be found. I had not counted on

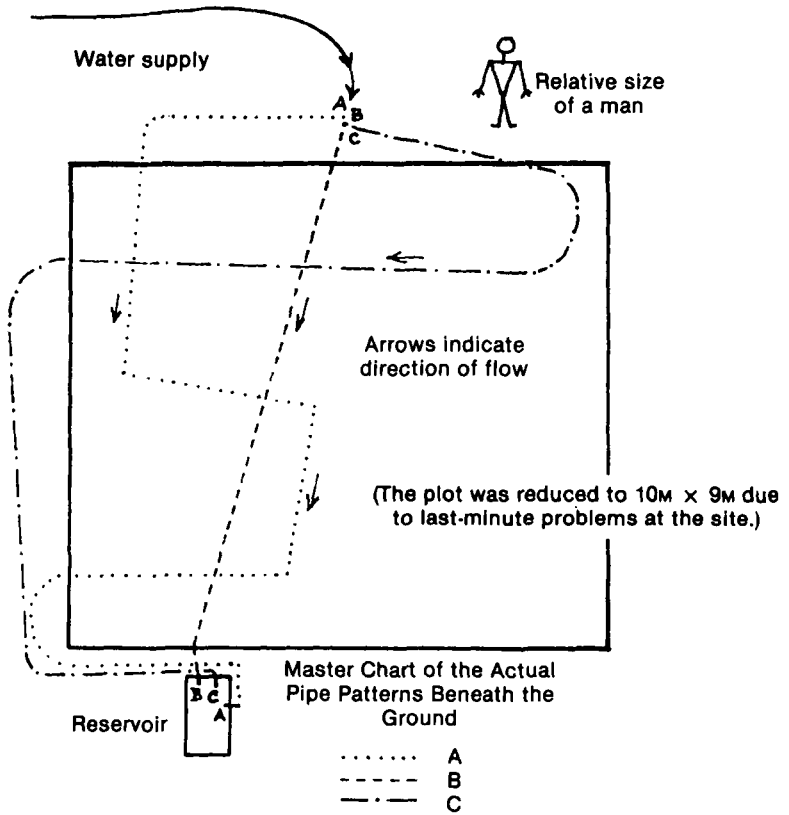


FIGURE 1. Plan of the test plot.

such a possibility as being outguessed, and though I believe Fontana's almost-success here was the result of naiveté rather than planning, it was a strong lesson for me. Regardless, the guess was totally wrong. Only one peg out of 30 was within the limits.

Next, he traced another zigzag path that was supposed to be—again—path C. This time, 2 out of 32 pegs fell within limits, at right angles to the true flow. Finally, when path B was chosen at random, Fontana showed signs of giving up; but when reminded that he had to do three trials, he merely indicated we could use his first try as a repeat. And that was nearly correct, though he did not actually dowse it out! Even then, only 6 of 30 pegs would have been correct, and Fontana was a loser.

Then Professor Lino Borga stepped up. He was enthusiastic, effervescent, and loquacious in the extreme. He declared that the prize was in the bag, and he was about to show us a thing or two. He apologized in advance for having to take my money. He was using a device I'd not seen before—two rigid sticks hinged together near one end, forming a "V" that spun about between his hands. His first path was in response to pipe B, and was

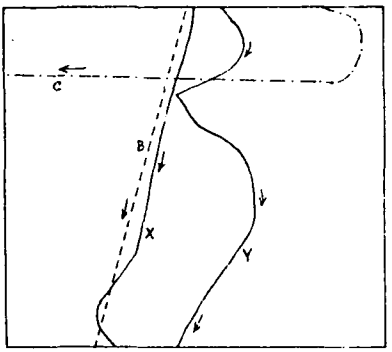


FIGURE 2. Fontana traced the vertical line (X) as path "C" (horizontal path at top), then the other (Y) as another attempt at "C." Finally, he did not trace his third try, but said we could use his first (X) as his third guess. It was actually "B"—the direct line between the valve and the reservoir!

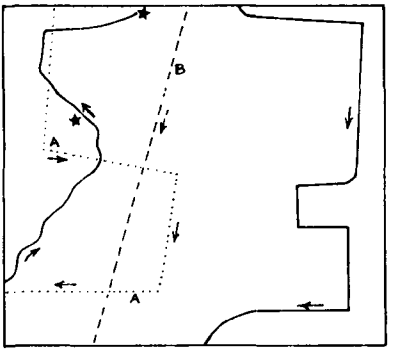


FIGURE 3. Borga's three attempts were far off the mark. He traced the pattern at the right as path "B" (dashed line), then traced it again as path "A" (dotted line), and then made the line at upper left to represent "A" again. The section between the stars indicates where water had ceased flowing, yet the dowser continued, not knowing this.

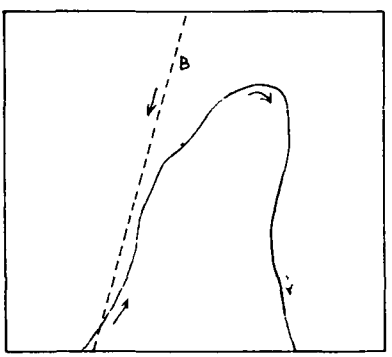


FIGURE 4. Path traced by Senatore. He was only able to make one attempt, due to lack of time. He crossed the actual water path only once, going the wrong way.

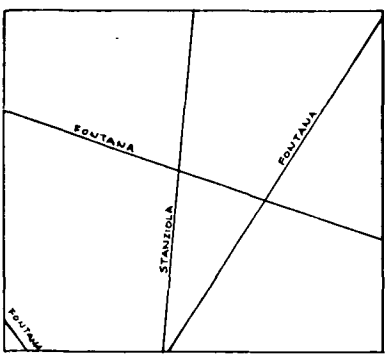


FIGURE 5. Only two dowsers decided there was any "natural" water on the site. Thus they disagreed with the other two, who said there was no water there. As seen in this chart, there was no agreement between any of them.

never even near it. When A was chosen, he decided it was again the same path he'd just traced; but he traced it again to be sure, repositioning several pegs by as much as a centimeter for greater accuracy. But again, this path *did not even intersect* the correct path. Finally, Borga gave us a wiggly response to A once again, which was not only incorrect but went in the wrong direction. Only 2 out of the 27 points he chose were within limits. All in all, he'd needed 58 pegs properly placed. He got 2, entirely by accident.

But the most interesting point about Borga's demonstration was this:

For the last few minutes of his last trace, we noted that the water had run out of the supply truck! Consult the map (Figure 3). Between the two spots marked by stars *there was no water flowing in the pipe at all.* Yet Borga continued his frenzied plotting with no water flow, and certainly not in the right place or direction. As we called his attention to the cessation of the water, saying that it was "running down," though it had actually *stopped* some time before, Borga exclaimed that it was evident from his motions. Sure enough, as he reached the end of the trace he was making, his rods slowed down, as if in response to the water stopping. This leads one to the suspicion that dowsing is the result of imagination and involuntary actions, and not a response to water or any other substance.

Then we turned to Mr. Stanziola, a pupil of Professor Borga. He probably suspected chicanery, for when he was asked to show that his dowsing-rod (a straight stick held in a bowed position) reacted to the water in the exposed part of the pipe as it flowed, he said he got no reaction. We terminated the test there, since even the fundamental dip of the rod was absent. I think Stanziola believed we had no water flowing at that point, but it was flowing copiously, as witnessed by the engineers present, at more than twice the 5-liters-a-second rate they had demanded. Exit Stanziola.

Vittorio Senatore was next, an intense young man using a piece of canelike stick, broken in the center so as to be flexible. He looped this into a script L shape and walked about entranced, eyes closed, though peeking a bit. Several times the stick flipped out of his hands, though under what mysterious power we could not tell, since he missed the chosen path (B) grandly—wrong path, wrong direction (Figure 4). Since time was running out, as well as water, he had the opportunity for only one trace, but agreed that his reputation would rest on that one attempt. In fact, Fontana, Borga, and Senatore all declared that they had been 100 percent successful, and were confident they had won the prize.

Since they had not been allowed to consult with one another after their trials, they had no idea that not only had they all failed, but two of them had declared there was no natural water flowing at the site, and the other two had plotted "rivers" and disagreed with each other. See Figure 5.

I will not detail the confrontation that took place after the tests when we retired to a local restaurant amid many bottles of spirits to discuss the results. Suffice it to say that our conclusion was that dowsing was very surely not demonstrated; yet the dowsers themselves, after due consideration of the day's events, thoroughly convinced themselves that some strange influence was afoot, since none of them had ever failed before!

I await other claimants to the prize offered. •

Science and Evolution in the Public Eye

Laurie R. Godfrey

Many educators have expressed surprise at the extent to which students believe sensationalistic and catastrophic explanations of the origins of cultural and biological traits. Their inclination is to ignore sensationalism as "unworthy" of serious discussion, but they are being hampered by political pressures from the sensationalists, who tend to view themselves as bearers of "true science" and as opponents of outdated scientific beliefs or orthodoxies. Thus these catastrophic and often cryptoscientific views of racial and cultural trait origins are being given increasing exposure in popular literature, on TV, in movies, and in public school and college classrooms.

Among the most notorious examples of this alarming trend are von Däniken's *Chariots of the Gods?* (1970), Barry Fell's *America B.C.* (1976), Jeffrey Goodman's *Psychic Archaeology* (1977), the "In Search of" TV series, and the current UFO mania. Organizations with blatantly racist motives, such as the Nazis and the Ku Klux Klan, who proclaim separate "origins" (or creations) for different "races," are once again growing in visibility. The "orthodoxies" of the anthropological "establishment" are being challenged by students who proclaim separate-origins explanations (a series of invasions from outer space, or "experiments" by a creator) and by some of those proclaiming a single creation.

These sensationalist views are financially supported by evangelistic grass-roots organizations. These organizations are politically active in the sense that each is "spreading the word." The various Bible research groups that hold weekly or biweekly meetings on college campuses engage in peculiar mixtures of odd-fact collecting and religious ceremony. Similarly,

---

Laurie Godfrey is assistant professor of anthropology at the University of Massachusetts, Amherst, and author of the forthcoming Evolutionary Change: A Problem-Solving Approach. *(Compress, Wentworth, N.H.).*

followers of Barry Fell and other popular heroes hold public meetings and "conferences" that are in some respects much like religious incantations. At a conference on so-called pre-Columbian colonizations of the New World (cf., Cook, 1978; Cole, 1978), which was held in Castleton, Vermont, in 1977, the organizers gave religious significance to every rock and mark on display in the front room. A woman clutching a copy of Fell's *America B.C.* advised a skeptical bystander that it was ridiculous to think that some of the stone structures found in the area might be colonial root cellars, as archaeologists maintain: "People would not cover root cellars with heavy slabs of rock," she said, "only shrines." "Someday," she admonished, "you, too, will believe."

Many proponents of catastrophic explanations of natural phenomena claim that these theories are well-founded in scientific fact and repeatedly express pained willingness to bear witness to their truth despite extreme antagonism from the scientific elite. Thus these movements combine proselytizing with an odd concept of "sciencing"—a "sciencing" that begins with a premise and denies any means of testing or refuting it.

In the past few years, fundamentalism, which incorporates "scientific creationism," has experienced dramatic growth. In 1978 a network news program carried a three-part report on the phenomenal growth of "born-again" Christianity in America, especially among the educated middle class. Shortly afterward *Newsweek* featured an article on "born-again" wives of national politicians. Simultaneously, courses on scientific creationism appeared in college curricula, along with courses on astrology, Atlantis, the teachings of von Däniken, and so on. Indeed, many academicians have jumped on the paranormal bandwagon.

It is a popular view that education should offer alternative paradigms as "equal but different" explanations of the same phenomena. This has been seen most clearly in recent years in the debate in California, and elsewhere, over teaching scientific creationism on an equal basis with the theory of evolution as an explanation of the similarities and differences among organisms. Unfortunately, "liberal" educators and politicians, in an effort to be "open minded," can be unwitting collaborators in spreading ultraconservative doctrines among our youth. While it is commendable to study unorthodox or unpopular issues without prejudice, the presentation of alternative explanations as "equal but different" implies that there is no way to choose between them.

More alarming, perhaps, is the political opposition to the liberal and open-minded educational programs that grew out of the 1960s. "Man: A Course of Study" (MACOS), an interdisciplinary behavioral-science project for elementary schools, came under severe attack in the United States a few years ago. Consequently, it has been banned in many localities, and its

national funding has been crippled. John Conlan, then a Republican congressman from Arizona, claimed that MACOS caused children to reject the values, beliefs, religions, and national loyalties of their parents (Smith and Knight, 1978, p. 4). Conlan singled out three of the authors of the MACOS teachers' guide for criticism. He accused Jerome Bruner of using psychological-warfare techniques, B. F. Skinner of using behaviorism, and Claude Levi-Strauss of using his allegedly dangerous leftist bias to subvert children for "one-world socialism." (Actually, the three scholars' articles were often in opposition to each other, but the guide was nevertheless withdrawn.)

"The consequence of Conlan's attacks on MACOS and Senator Proxmire's criticism of 'those damn fool projects in the behavioral sciences,' which helped prepare the ground for attacking MACOS, was that National Science Foundation funding for MACOS, and all other federally funded curriculum projects, was stopped pending a review by various congressional committees" (Smith and Knight, 1978, p. 5). Smith and Knight document the banning of MACOS in Queensland, Australia, by crusaders using the American experience as a guide. The authors demonstrate by content analysis of the issues raised and key words in the literature that the anti-MACOS and fundamentalist movements are characterized by dogmatism, acceptance of authoritarianism, and totalitarian values that stress state and community control over the individual. On the other hand, according to their analysis, pro-MACOS and pro-evolution literature stresses relativism, freedom of thought, and critical analysis. Anti-MACOS propaganda was found to be high in "coercion" (as opposed to choice) and characterized by high degrees of censorship, ethnocentrism, aggression, and violence (p. 10).

In an article entitled "Public Appreciation of Science," Amitai Etzioni and Clyde Nunn (1974) cite evidence that educated people tend to be less authoritarian than uneducated people and that people who "distrust science" are likely to be more authoritarian. "There is also evidence linking authoritarianism with unscientific beliefs, even though *all* authoritarians are not anti-science" (p. 199). They cite another study showing a correlation between authoritarianism and superstition, pseudoscientific attitudes, and racial intolerance.

What creationists and other sensationalists have in common is the division of the world into true believers heading for salvation and all others heading for damnation. The "saved" group may exclude members of certain racial minorities, social classes, or political factions (socialists or communists), or homosexuals, or evolutionists.

The recent partial disaffection from science of an apparently significant portion of the educated segment of society can be seen as a potentially

dangerous outcome of the conservative political climate of the 1970s. Increasing numbers of educated people are accepting, even demanding, simple explanations of complex phenomena. Thus fixed-species explanations have become respectable alternative paradigms whose inclusion in the educational system is receiving increasing legal support. In considering a challenge to the teaching of Darwinism, an article in the *Yale Law Journal* (Bird, 1978) makes a political-legal statement regarding what might be taught as respectable alternatives to Darwinian evolution. Western society may soon witness court rulings on "proper science" similar to legal maneuvers regarding "proper literature" as opposed to pornography. Creationists are advertising new programs to teach scientific creationism at such universities as Michigan State, Wichita State, and the University of West Virginia.[1] Legal arguments advocating laws, court orders, and school policies requiring the teaching of creationism as coequal with evolutionism (such as those summarized by Bird, 1978) are blatant attempts to define "proper science" according to political guidelines and without reference to either predictive advantage or rational explanation. Unfortunately, while scientific creationism is very poor science, most people are ill equipped to evaluate it as such. Many, like Wendell Bird, see the issue as a political struggle between proponents of "equal but opposite" dogmas. The question of what is a good or a poor explanation of similarities and differences in form among organisms in space and time is rarely, if ever, raised.

It is even difficult for evolutionary biologists, who are most cognizant of the data that evolutionary biology attempts to explain, to debate scientific creationism effectively. These difficulties are based on a number of factors, not all of which are easily remedied:

1. Creationist challenges to evolutionary biology bear the earmark of irrationality—they are not simply the presentation of "facts" that are not facts, but they are illogical leaps to conclusions that do not follow from the premises—a kind of "Aha!" complex. For example:
   —There is an error term in carbon-14 dating. Conclusion: Aha! (This is supposed to prove that there are no old fossils, or that there can be no supposition of great antiquity.)
   —Scientists have *not been able to trace the origin* of many suids (pigs) through fossils. Conclusion: Aha! (This is supposed to suggest that extant suids share no common ancestry.)
   What is the use of scientists introducing probability theory or information about kinds of systematic errors in the context of a public debate? The issues are far more complex than the creationists would have the public believe.
2. Creationists tend to appeal to authority—to neat, easy solutions to

complex questions. Such arguments tend to be attractive to the frustrated, the needful, and the alienated.

3. Many people in Western society are ambivalent toward science. Polls show wide, though declining, respect for "science" (Etzioni and Nunn, 1974; Bainbridge, 1978), but they do not define science or test their subjects' understanding of what they say they respect. Respect for authority is *not* respect for science. Creationism, like other simplistic cults, affords people a way of rejecting scientific elitism without seeming to reject science. Indeed, its proponents believe themselves to be the true bearers of scientific facts. They are often more convinced of their righteousness than the "elitist" scientists they accuse of being close-minded. They are convinced that they alone possess the "truth" and they *define* science as that truth. Clearly, there is a basic difference between what scientists understand as science and what creationists understand as science.
4. Scientific creationism is based in large part upon fallacious premises—a misunderstanding of what evolutionary biology is about.

The latter two problems are the most frustrating because they speak more directly to the failure of the educational system to teach rational problem-solving. Not everyone need be well versed in evolutionary biology or anthropological analysis of human biological and cultural variation, but people should be able to recognize sloppy arguments and to choose tentatively between alternative explanations. The fact is that the educated American public is surprisingly unable to cope with even the simplest incorrect premises or illogical, particularistic arguments emanating from scientific creationists and others.

Popular perceptions of evolution, when surveyed directly and indirectly through an analysis of contemporary popular and educational literature, reveal a startling misunderstanding of the basic concepts of Darwinian evolution. Creationists describe evolution as a kind of accidental creationism; despite their allusion to its slow pace, they perceive evolution to be clearly catastrophic. They are degenerationists debating an anthropocentric Doctrine of Progress, which modern evolutionism is *not*. Yet their perception of what modern evolutionism *is*, is not far from that of the general educated public. It is not surprising that educated people are poorly equipped to handle these challenges and succumb easily to political pressures from proselytizing lobbyists.

Numerous popular writers, philosophers, and educators are proclaiming the death of natural selection: "Nobody takes natural selection seriously anymore," "Natural selection is tautological" (cf., Baum, 1975; Bethell, 1976, 1978; Flew, 1967; Himmelfarb, 1968; King, 1972; Koestler,

1. Natural Selection was Darwin's main idea as to how evolution happened. The fittest survive and the unfit perish. Fine! But where is evolution in this? Because a certain rabbit can run faster or hop higher and therefore may live longer and reproduce more rabbits in no way implies that the rabbit (or its offspring) would be more fit for survival if it were evolving into some other animal. In fact, the opposite is true. Any alteration in a rabbit's physical or mental characteristics would *make it less fit, not more fit for survival. Natural* selection cannot explain evolution. Nothing can explain how evolution happened, because it **never happened!** That is a fact and anybody who says it isn't is being an **unscientific fanatic.**

2. Students, how many times have you seen and heard the idea that scientists have proof for evolution in the **fossil** record, in the bones? Here is the truth; let any scientist come forward and deny it if he can: There is not one bone in the entire world that shows one animal evolving into another. All the pictures in your books which are there to convince you that man evolved from apelike creatures (Java Man, Neanderthal Man, Nebraska Man) have all been proven not to be missing links. They have all been proven to be either apes or men, not apes changing into men. (So-called Nebraska Man was built up on the evidence of one tooth which turned out to be the tooth of an extinct pig!) There are no ape-men because evolution is a great deception. The supposed evolution of the horse, eohippus, which is in your science book, no doubt, has been proven impossible. Check your science book for other misleading so-called evidences for evolution. Is the peppered moth there? It's still a moth, isn't it? Is Haeckel's embryological chart there? Your book doesn't tell *you Haeckel was kicked out of the university for misrepre*senting the truth about embryos, does it? Your book doubtless mentions the fruitfly *Drosophila Melanogaster*. But does it tell you that exhaustive experiments prove beyond any question that mutations can never explain evolution? Ask your science teacher to tell you about these great deceptions which cannot be carried on under the name of science. Fossils all show complete specimens. They were not changing into anything. The true scientist must look at the vast fossil record and admit that it proves one thing beyond question, namely that no fossil has ever been uncovered which shows one animal changing into another.

3. Two basic laws of Physics (the Law of Conservation of Matter / Energy, and the Law of Increasing Entropy) *flatly* contradict the theory of evolution. Everything science knows tells it that these laws are unbendable. They are scientific laws. They are not hypotheses. They are not theories. Yet, evolution theory demands that these iron laws be broken and laid aside. Energy itself does not produce complex, functioning systems. That takes planning and a Planner! Great periods of time do not cause things to improve (get better, become more complex) as evolution theory demands. On the contrary great periods of time cause decay .and degeneration, the very opposite of evolution! The First and Second Laws of Thermodynamics prove evolution to be impossible. *There is no getting around* this truth.

4. Mathematics proves evolution impossible. Computers prove evolution impossible. Charles Eugene Guye, a Swiss mathematician, has calculated the chances of a single molecule of a protein-like substance being formed by accident at 10^{320} to 1. That means that the odds against even one molecule evolving would be one in 100,000,000,000

For example, when college students with some background in biology, anthropology, and earth science were asked to analyze four specific antievolutionary arguments published by the fundamentalist Fair Education Foundation, of Clermont, Florida (see Figure 1), many were unable to do so with any degree of sophistication. The students were given an open-ended questionnaire that instructed them to state their agreement, disagreement, or uncertainty regarding each of the four arguments presented, and then to discuss them on logical, theoretical and/or substantive grounds.

Here are some comments from one class ($n = 40$) in the survey. Some general reactions:

> I don't understand, so can't argue. This is new to me.
>
> I agree with these arguments. Evolution has too many impossibilities and I don't believe in it.
>
> Look, I can't answer these questions. Sorry I can't help you out, but this is beyond me.
>
> This is a farce. I believe we evolved, but I don't exactly know how.

Replies to specific statements included:

> Number 1 is convincing because of the number of species.
>
> Number 2 seems very reasonable, but who do I believe—you or them? It all sounds good. But ape and man seem linked in some way—I don't know how. Number 3 sounds good—so why do people still talk about evolution? Isn't the public getting the evidence from the scientists? It's their job to keep us informed.
>
> Number 1 is a bad argument. Number 2 is a good argument if all the statements are true. Number 3—another good argument if the guy isn't lying. Number 4—the last three arguments taken together form an excellent argument against evolution.
>
> Number 2 sounds reasonable. It sounds O.K. Actually, I have no idea if it's right or wrong.
>
> Number 4: If these calculations are valid, perhaps "evolution" as a theory should be reconsidered.
>
> Number 2: The logic is good—uncovering deceptions and farces. But there must be some way to explain one animal evolving into another. Somebody must have offered an explanation sometime. Number 3: What is "decay" to one person (or one period) might be "improvement" to another.

> Number 2 is convincing. An individual could not dispute such an argument. Number 4 would raise doubts in anyone's head.
>
> Number 1: There are many examples. They make you think about each idea, as they seem reasonable. Convincing and logical, but too forceful.
>
> Number 4: Probability is right—it says it could happen and it *did*. A male horse arrived at the right time.

The problem extends beyond a general misunderstanding of "fitness" and "natural selection." (Fitness is *not* survival; natural selection is *not* the result of random or accidental, and therefore unpredictable, differential survival or reproduction.) The term *evolution* is itself commonly misunderstood. Biological evolution refers to change in the genetic composition of populations over time. Many people (not merely fundamentalists, but also the popular press and pro-evolution scientists) ignore genetic commonality and continuity when writing about biological evolution. For them, biological evolution means change, and the mechanisms need not be genetic. For many, "evolution" is imbued with an almost mystical directionality—an inevitable progressionism. But while evolutionary biologists recognize that changes in the genetic composition of populations *occasionally* give rise to greater developmental complexity of organisms, or to more complex interactions between organisms and their environments, neither "progress" nor "directionality" are central to the concept of biological evolution. In this context, however, it is interesting to compare definitions of biological evolution culled from fundamentalist tracts, the popular press, and science writers.

A flier from the Fair Education Foundation, quoting the Bible-Science Association of Western Pennsylvania, said:

> Evolution is here defined as a real, natural, self-caused continuing uphill process—in energy, structure and information—which goes from disorganized to organized, from random order to ordered, from lower to higher, from simple to complex, from atom to amoeba, from molecules to man.

A writer for the *Houston Post* (Aug. 23, 1964) said:

> Evolution, in very simple terms, means that life progressed from one-celled organisms to its highest state, the human being, by means of a series of biological changes taking place over millions of years.

This definition is cited in *Did Man Get Here by Evolution or Creation?* (Anonymous, 1967), a book distributed by Jehovah's Witnesses. *The Penguin Dictionary of Archaeology* (Bray and Trump, 1970) defines evolution as:

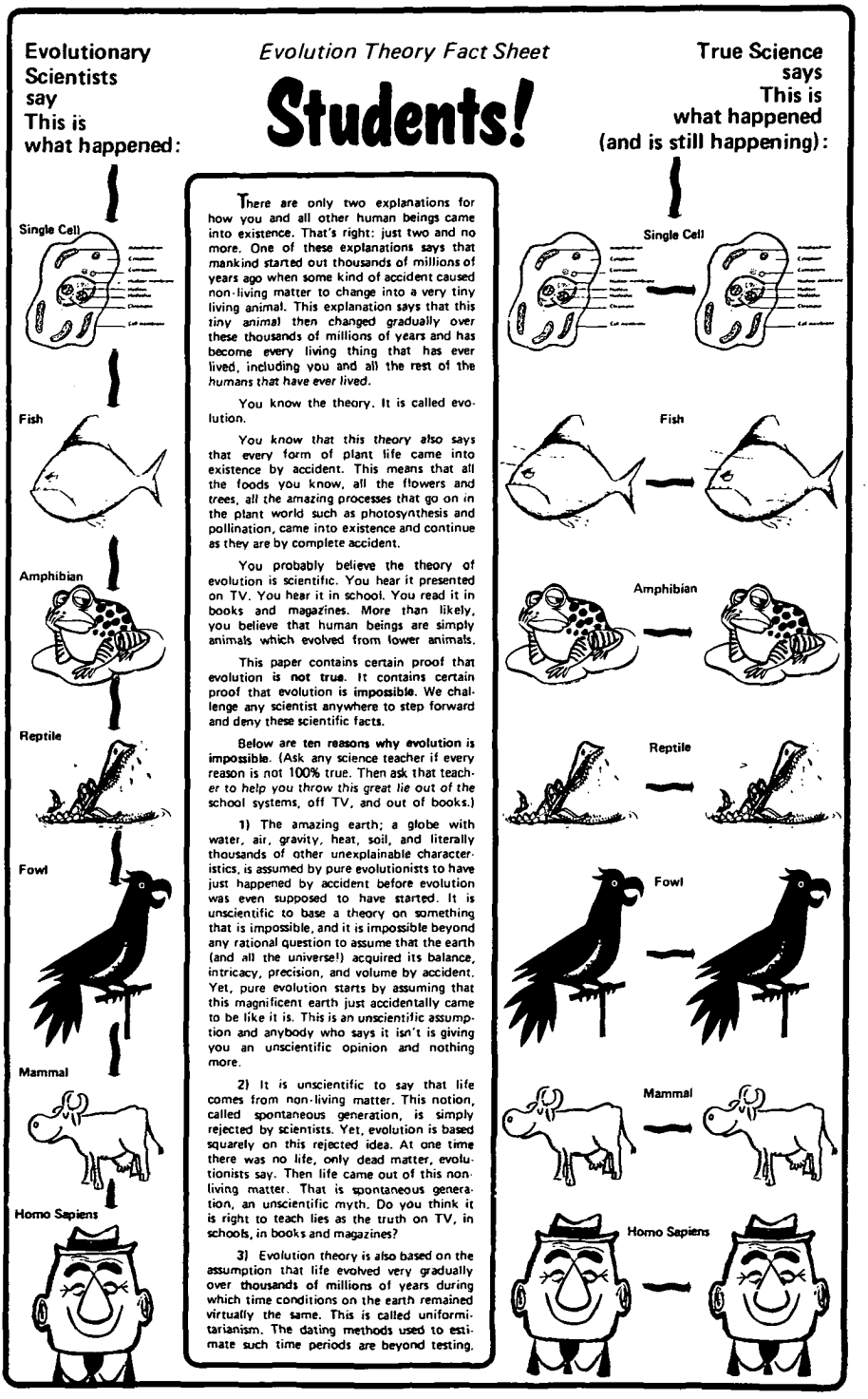

Evolutionary Scientists say This is what happened:
Evolution Theory Fact Sheet
Students!
True Science says This is what happened (and is still happening):
Single Cell
Fish
Amphibian
Reptile
Fowl
Mammal
Homo Sapiens
There are only two explanations for how you and all other human beings came into existence. That's right: just two and no more. One of these explanations says that mankind started out thousands of millions of years ago when some kind of accident caused non-living matter to change into a very tiny living animal. This explanation says that this tiny animal then changed gradually over these thousands of millions of years and has become every living thing that has ever lived, including you and all the rest of the humans that have ever lived.
You know the theory. It is called evolution.
You know that this theory also says that every form of plant life came into existence by accident. This means that all the foods you know, all the flowers and trees, all the amazing processes that go on in the plant world such as photosynthesis and pollination, came into existence and continue as they are by complete accident.
You probably believe the theory of evolution is scientific. You hear it presented on TV. You hear it in school. You read it in books and magazines. More than likely, you believe that human beings are simply animals which evolved from lower animals.
This paper contains certain proof that evolution is not true. It contains certain proof that evolution is impossible. We challenge any scientist anywhere to step forward and deny these scientific facts.
Below are ten reasons why evolution is impossible. (Ask any science teacher if every reason is not 100% true. Then ask that teacher to help you throw this great lie out of the school systems, off TV, and out of books.)
1) The amazing earth; a globe with water, air, gravity, heat, soil, and literally thousands of other unexplainable characteristics, is assumed by pure evolutionists to have just happened by accident before evolution was even supposed to have started. It is unscientific to base a theory on something that is impossible, and it is impossible beyond any rational question to assume that the earth (and all the universe!) acquired its balance, intricacy, precision, and volume by accident. Yet, pure evolution starts by assuming that this magnificent earth just accidentally came to be like it is. This is an unscientific assumption and anybody who says it isn't is giving you an unscientific opinion and nothing more.
2) It is unscientific to say that life comes from non-living matter. This notion, called spontaneous generation, is simply rejected by scientists. Yet, evolution is based squarely on this rejected idea. At one time there was no life, only dead matter, evolutionists say. Then life came out of this non-living matter. That is spontaneous generation, an unscientific myth. Do you think it is right to teach lies as the truth on TV, in schools, in books and magazines?
3) Evolution theory is also based on the assumption that life evolved very gradually over thousands of millions of years during which time conditions on the earth remained virtually the same. This is called uniformitarianism. The dating methods used to estimate such time periods are beyond testing.

FIGURE 2. From an anti-evolutionist group's "fact sheet" poster.

> The gradual change of form of living organisms throughout time, usually... towards complexity and functional improvement.

The similarity of these definitions to each other is more striking than their similarity to modern biological theory. Fundamentalists are not the only ones who ignore the concepts of genetic commonality and continuity. Consider the following statement made to *Penthouse* magazine by Robert Jastrow, director of NASA's Goddard Institute for Space Studies and a member of the Institute for Advanced Studies:

> We are on the way to being living fossils. But the history of life indicates that man is likely to be the rootstock out of which a higher form will evolve. It will not be a more intelligent man—man *is Homo sapiens*—but rather a new form, something beyond man. The question now is whether this new form will be a biological entity having puny limbs and a big head to accommodate the progression of intelligence. Will the brain of man continue to be housed in some hollow shell of bones, fed by blood vessels, from a model developed by the fishes 300 million years ago? Or will it be something different? I say that computers, as we call them, are a newly emerging form of life, one made of silicon rather than carbon. (Anonymous, 1978)

Freeman Dyson, a leading theoretical physicist, also at the Institute for Advanced Studies, makes explicit a miracle explanation of human evolution:

> For apes to come out of the trees, and change in the direction of being able to write down Maxwell's equations... I don't think you can explain that by natural selection at all. It's just a miracle. (Davis, 1978)

Antievolutionists can find sympathetic scientists to quote. Dr. Louis Bounoure, Director of Research of the National Center for Science Research in France, is quoted in one tract (Kutsch, 1978:6) as saying, "Evolutionism is a fairytale for grown-ups. The theory has helped nothing in the progress of science. It is useless." Similar quotations abound in scientific creationist literature.

There is a serious need for innovative approaches to the teaching of the evolution of complex adaptations. It should not be reserved for graduate courses, and it need not be. To be able to deal with actual data, make sophisticated predictions, and test hypotheses is not beyond the ability of the average student, and these are skills useful in everyday life—not just in theoretical biology. Science should be neither worshipped nor feared. People practice it daily as they solve problems and cope with reality, and it seems reasonable to hope that they can be helped to acquire the tools to do it as well as they can.

Too few people can apply the concept of predictive advantage when dealing with formal sciences, where it should be most explicit, let alone apply it (or other aspects of scientific analysis) to their own worlds. Too often science is simply a fact list in the classroom rather than an example of organized rational thinking.

Educators have a responsibility to resist political pressures urging them to bastardize the educational process by pretending that "all ideas are equal." Indeed, they have a responsibility to *improve* the teaching of sciences such as evolutionary biology at the introductory level in the hopes that educated people will be better prepared to handle the socio-political onslaught of modern life. Evangelists asking for belief in authority should not monopolize the mass media, whether they be creationists or evolutionists. Belief systems affect socio-political decisions, and creationism and other cult movements promising salvation to a select few are urging people to join, hold hands, and wait for miraculous solutions in the face of real economic hardship. Aside from the possible threat of a resurgence of racism and authority-based political oppression, the Western world is faced with the immediate threat of further debasement of the educational system. Can the critical problems facing humanity today be solved by cultists? Much though holding hands may have its psychological rewards, the material-world results may be oppressive.

References

Anonymous 1964. *Houston Post* (August 23).

Anonymous 1967. *Did Man Get Here by Evolution or Creation?* New York: Watchtower Bible and Tract Society.

Anonymous 1978. Interview with Robert Jastrow. *Penthouse* (October): 125-126; 136; 176.

Bainbridge, William S. 1978. "Chariots of the Gullible." *Skeptical Inquirer* 3(2): 33-48.

Baum, R. F. 1975. "Coming to Grips with Darwin." *Intercollegiate Review* (Fall): 13-24.

Bethell, Thomas 1976. "Darwin's Mistake." *Harper's* (February). (Reprinted in *Christianity Today* 21:12-15.)

_____. 1978. "Burning Darwin to Save Marx." *Harper's* (December): 31-38; 91-92.

Bird, Wendell R. 1978. "Freedom of Religion and Science Instruction in Public Schools." *Yale Law Journal* 87(3):515-570.

Bock, W. J., and G. von Wahlert 1965. "Adaptation and the Form-Function Complex." *Evolution* 19:269-299.

Bray, Warwick and David Trump (eds.) 1970. *The Penguin Dictionary of Archaeology*. Baltimore: Penguin.

Cole, John R. 1978. "Anthropology Beyond the Fringe," *Skeptical Inquirer* 2(2):62-71.

Cook, Warren (ed.) 1978. *Vermont, B.C.* Castleton, Vt.: Castleton State College.
Davis, Monte 1978. Interview with Freeman Dyson. *Omni* (October):100-106; 173.
Dobzhansky, R., F. J. Ayala, G. L. Stebbins, and J. W. Valentine 1977. *Evolution.* San Francisco: W. H. Freeman.
Etzioni, Amitai and Clyde Nunn 1974. "The Public Appreciation of Science in Contemporary America." *Daedalus* 103(3):191-205.
Fair Education Foundation n.d."Evolution Theory Fact Sheet" (flier). Clermont, Fla.
Fair Education Foundation n.d. "$5,000 Reward and a Challenge to Evolution" (flier). Clermont, Fla.
Fell, Barry 1976. *America, B.C.* New York: Quadrangle.
Flew, Antony 1967. *Evolutionary Ethics.* New York: St. Martin's Press.
Godfrey, Laurie (in press). *Evolutionary Change: A Problem Solving Approach.* Compress, Wentworth, N.H.
Goodman, Jeffrey 1977. *Psychic Archaeology: Time Machine to the Past.* New York: G. P. Putnam's Sons.
Gould, Stephen J. 1970. "Evolutionary Paleontology and the Science of Form." *Earth Science Reviews* 6:77-119.
_____. 1977. *Ever Since Darwin.* New York: Norton.
Himmelfarb, Gertrude 1968. *Darwin and the Darwinian Revolution.* New York: Norton.
King, Rachel 1972. "The Inadequacy of Naturalistic Selection" (review of Macbeth 1971). *Christianity Today* (June): 19-25.
Koestler, Arthur 1978. *Janus: A Summing Up.* New York: Random House.
Kutsch, Richard E. 1978. "An Alternative Viewpoint." *Students for Origins Research* (Goleta, Calif.) 1(1):5-6.
Macbeth, Norman 1971. *Darwin Retried.* Boston: Gambit.
Smith, R. and J. Knight 1978. "The Politics of Educational Knowledge: A Case Study." Paper presented to the meeting of the Sociological Association of Australia and New Zealand, May 20. (Cited with permission of the authors.)
Von Däniken, Erich 1970. *Chariots of the Gods?* New York: G. P. Putnam's Sons.

Note

1. Wichita State University professor Paul D. Ackerman, president of the Creation Social Science and Humanities Society, informs me that there is no official creationist program at WSU; his proposal for a creation-science undergraduate or graduate major under the new independent field major program has had no takers so far. But in the future, independent field major programs may be *the* important vehicle for advancing creationist views at universities; so the serious issue remains, regardless of immediate political contingencies. •

In Search of Delusion: Television Pseudodocumentaries

William Sims Bainbridge

The prevalence of pseudodocumentary television programs about the occult and pseudoscience has become a serious social issue. Such shows may spread false and dangerous notions among the viewing public, both encouraging faith in costly frauds and diminishing popular acceptance of real scientific findings. We need to understand this important phenomenon in contemporary public opinion, but social scientists have given it scant attention. This article helps begin research on occult and pseudoscientific TV propaganda with a questionnaire study of two archetypal programs (now canceled but available in reruns): "In Search of" and "Project UFO." The first is an omnibus of parapsychology, ancient mysteries, magic quests, and radical speculation presented as authentic knowledge. The second is a dramatized documentary of alleged flying-saucer sightings investigated by two Air Force officers assigned to the legendary Project Blue Book.

The Questionnaire

The data used in this study come from one of three lengthy questionnaires that form the heart of a study of science-fiction and fantasy literature. The questionnaire was filled out by 379 persons attending the 1978 World Science Fiction Convention in Phoenix, Arizona. There are two groups of respondents who could provide valuable data: a random sample of citizens and a group of experts in the relevant culture. A random sample would allow us to generalize our findings to the society as a whole with great

William Sims Bainbridge is professor of sociology at the University of Washington, Seattle.

precision, but would be extremely expensive to obtain, especially so because the sample would have to be *very* large to include any significant number of people who were sufficiently familiar with the issues to give salient opinions. A panel of experts allows us to explore complex and subtle questions with the greatest efficiency, detecting even very weak effects and those that operate indirectly. The annual World Science Fiction Convention attracts people who are ideal respondents for a study of the occult and pseudoscience, as well as of fantasy literature itself, because the science-fiction subculture is a bastion of these deviant ideologies.

The questionnaire collected information mainly about preferences, and most sections gave the respondent lists of things, such as TV shows, and asked him to indicate on a seven-point scale (from 0 to 6) how much he liked each one. In my analysis, I looked primarily at correlations between pairs of items. For example, if a person liked "In Search of" more than the average person did, would he also tend to prefer "Project UFO" as well? The answer to this question, as we shall see, is yes. The questionnaire contained five sections, exploring respondents' attitudes toward different forms or aspects of fiction, as follows:

1. Eighteen miscellaneous items
2. Twenty-nine fiction authors
3. Twenty-five types of literature and other media
4. Sixty-seven science-fiction or fantasy movies

TABLE 1
Popularity Ratings of the Television Programs

Program or Type	Average Popularity Rating	Percent of 379 Responding
"In Search of"	3.32	68.1
"Project UFO"	2.73	81.8
Average of 24 other TV shows	3.02	84.9
"The average science-fiction TV show"	2.45	97.1
"The average TV show that is *not* science fiction"	1.74	98.2
Occult literature	1.99	93.1

Average popularity ratings are scored on a seven-point scale from "0" (do not like) to "6" (like very much).

5. Twenty-six TV shows, including "In Search of" and "Project UFO"

Table 1 gives the popularity ratings of the two pseudodocumentary programs, along with the average of the 24 other television shows on my list. This table also includes three items from part 3 of the questionnaire: "the average science fiction television show," "the average television show that is *not* science fiction," and "occult literature." In popularity, the two pseudodocumentaries bracket the average for the other twenty-four. With this table providing baselines, we can examine the qualities of the two programs.

The Character of the Pseudodocumentaries

Table 2 allows us to verify that the two programs really are saturated with occult or pseudoscientific notions. It tabulates popularity of the two shows, and the item on occult literature, against belief in ESP. The exact question was: "Do you think that ESP (extrasensory perception) exists, or not?" Of the 376 who responded, 39.1 percent said ESP "definitely exists," 27.9 percent said it "probably exists," 30.1 percent said it "possibly exists," and only 2.9 percent were willing to assert confidently that ESP "does not exist." The table gives the average popularity ratings expressed by people who hold each of the three common opinions about ESP. The differences are quite striking. The more firmly a person believes in ESP, the more highly he rates the two programs and occult literature.

TABLE 2
Belief in ESP and Program Preferences

Question: "Do you think that ESP (extrasensory perception) exists, or not?"

	Average rating of program for those respondents who feel:			
	ESP definitely exists	ESP probably exists	ESP possibly exists	Summary correlation (tau)
"In Search of"	3.97	3.28	2.48	0.27
"Project UFO"	3.20	2.80	2.15	0.21
Occult literature	2.53	2.25	1.15	0.25

Average popularity ratings are scored on a seven-point scale from "0" (do not like) to "6" (like very much).

Other results from the study support these findings. The correlation between preference for "In Search of" and for "occult literature" is significant ($r = 0.26$). The figure linking "Project UFO" with "occult literature" is much less ($r = 0.13$), probably indicating that this show has little supernatural flavor and draws more heavily on technological hokum.

Of the 29 science-fiction and fantasy authors, only two were connected to the two programs: L. Ron Hubbard and Richard S. Shaver. Hubbard, of course, is the man who left science fiction in 1950 to found Scientology, one of the most successful pseudoscientific cults. Significant correlations link Hubbard with "In Search of" ($r = 0.26$) and with "Project UFO" ($r = 0.20$). Only 50 viewers were familiar with Shaver and either show, so his correlations were statistically unstable, if highly suggestive. Shaver was only weakly linked with "Project UFO" ($r = 0.17$) but quite strongly with "In Search of" ($r = 0.31$). In the mid-1940s, Ray Palmer's science-fiction magazine, *Amazing Stories*, promulgated the "Great Shaver Hoax," in which Shaver contended through letters, articles, and stories that *deros*, a race of sinister, subterranean humanoids, was gnawing steadily at the roots of our civilization. In caves deep under the earth, Shaver said, he had run into these monsters, and the whole allegedly true story was an extreme version of the kind of thing presented on "In Search of."

The most interesting results came from analysis of relationships linking individual television programs into groups according to their basic similarities. Detailed examination of associations among all 26 programs might take a long time. I have a large table showing correlations linking each pair, a total of $(26 \times 25)/2 = 325$ coefficients. Rather than plod through this morass of figures, I will use a mode of analysis that deals with many relationships simultaneously, summarizing the main patterns buried in the table. A commonly used form of *factor analysis*, this technique will reveal the true category of television presentation to which "In Search of" and "Project UFO" belong.

A Factor Analysis

Factor analysis is a mechanical procedure that hunts for commonalities in the correlations linking a number of variables. (For the record, the technical specifications of the particular computer run are: pairwise deletion of missing data, principle factoring with 50 iterations, calling for all factors with eigenvalues greater than one, varimax rotation.) Seven "factors" emerged. In the printout, each factor is represented by a column of figures giving the "factor loading" of each of the 26 shows for that factor. The loadings are coefficients that indicate how closely each show is associated

with a given factor. In this analysis they range from 0.78 to - 0.16. To decide which shows are in which groups, I arbitrarily chose 0.45 as the cut-off point, below which I would ignore the loadings. Any show with a loading of 0.45 or greater would be considered a member of the factor. Following are the results, counting down so we will reach the most interesting factor last:

No factor: Three shows were so nondescript or multifaceted that they failed to load highly on any factor: "Quark," "Tarzan,"and "Voyage to the Bottom of the Sea."

Factor seven: A surrealistic political allegory occupies this factor all alone: "The Prisoner."

Factor six: Two Saturday-morning "kid-vid" children's programs share this factor: "Land of the Lost" and "Space Academy."

Factor five: Here we find a pair of sophisticated black-and-white anthologies from the sixties: "The Twilight Zone" and "The Outer Limits."

Factor four: Three science and nature documentaries cluster together: "National Geographic," "Wild Kingdom," and "Nova."

Factor three: Situation comedies, some complete with laugh tracks, make up this group: "The Munsters," "My Favorite Martian," "Bewitched," and "Lost in Space."

Factor two: Five shows are distinguished by the superhuman characters named in their titles: "The Bionic Woman," "The Six-Million-Dollar Man," "Wonder Woman," "The Incredible Hulk," and "The Man from Atlantis."

Factor one: This is the group of programs that concerns us: "In Search of," "Project UFO," "Fantasy Island," "The Man from Atlantis" (again), "Space: 1999," "Logan's Run," and "Star Trek."

Although Factor one is headed by our two pseudocumentaries, it also groups together five fantasy and science-fiction programs. Table 3 lists the seven in order, along with their loadings on the factor and other data. Despite the fact that "In Search of" and "Project UFO" have the highest loadings, "Fantasy Island" is not far behind, and I am tempted to call this the Fantasy Factor, rather than the Occult Factor. The common element shared by the shows is that they are generalized wish-fulfillment fantasies. Most of them, including the pseudodocumentaries, are fantasy travelogues in which the camera and heroes visit various marvelous places in search of wonder. "Fantasy Island" is a mythical resort where two vacationers each week live out their life's supreme wish.

The factor analysis indicates that the most prominent characteristic of the pseudodocumentaries is simple *fantasy wish-fulfillment.* Had the two programs been meaningless and lacking in character, they might not have appeared in any factor, like "Quark," a short-lived show about the captain

TABLE 3
Factor one—General Television Fantasy

Program	Factor Loading	Correlation in Ratings (r) "In Search of"	"Project UFO"	"The average science fiction TV show"
"In Search of"	0.70	—	0.45	0.32
"Project UFO"	0.61	0.45	—	0.35
"Fantasy Island"	0.54	0.42	0.44	0.38
"The Man from Atlantis"	0.52	0.43	0.40	0.46
"Space: 1999"	0.52	0.44	0.34	0.45
"Logan's Run"	0.52	0.36	0.44	0.55
"Star Trek"	0.45	0.33	0.30	0.37
Average of 19 others	0.17	0.21	0.19	0.21

of an interplanetary garbage scow. Had they been truly special in nature, distinctively supernatural in their appeal, they could easily have defined their own factor, like "Land of the Lost" and "Space Academy." Had they been perceived by viewers as real, factual documentaries, they could have joined the factor with "National Geographic," "Wild Kingdom," and "Nova." But "In Search of" and "Project UFO" did none of these things. Instead, they joined in a grab-bag factor of fantasy.

Table 3 demonstrates the powerful bonds uniting Factor one and further indicates its meaning. The first column of figures, the factor loadings, are roughly equivalent to correlation coefficients showing how each item is related to the basic idea of the cluster. The second and third columns give the correlations (Pearson's r) linking each program with "In Search of" and "Project UFO." The association between them is quite strong ($r = 0.45$), but each of them is tied almost as strongly to other shows. In fact, within the limits of statistical certainty, they are connected as closely to "Fantasy Island" and "The Man from Atlantis" as they are to each other.

The fourth column indicates the correlations with one of the items from part 3 of the questionnaire: "the average science-fiction television show." Here, also, we see some large coefficients. A huge correlation ($r = 0.55$) identifies "Logan's Run" as a run-of-the-mill program par excellence. Indeed, the entire factor seems to be preferred by viewers who have an

exceptional tolerance for sci-fi on TV. Perhaps the factor indicates poor taste as well as fantasy. Factor analysis of data of this kind often produces a factor with these qualities; it did so in my study of the 67 movies included in the questionnaire. To a great extent Factor one is a *general factor,* clustering seven items that lacked the distinctive qualities expressed by smaller factors. The important point is not that such a factor exists but that the two pseudodocumentaries were swallowed up by it.

The bottom row of Table 3 provides a comparison with the 19 programs not highly loaded on Factor one. The four coefficients are small, but statistically significant, and reflect the fact that there tended to be some correlation linking every show with every other one. This resulted from the tendency of some respondents to like television, in general, better than other people do. But the numbers in the bottom row are much smaller than any others in the table, underscoring the separation between Factor one and the majority of the programs.

Conclusion

We have seen that "In Search of" and "Project UFO" do represent important aspects of the occult and of pseudoscience, for example, through their association with ESP. But we also have seen that viewers do not put this pair of programs into a class by themselves. Rather, the defining characteristic of the pseudodocumentaries seems to be wish-fulfillment fantasy, a brand of entertainment in which fact and fiction are not clearly distinguished. Therefore, the pseudodocumentaries are lumped together with other shows that make no pretense of scientific accuracy, and which form a category only in their very general satisfaction of human desires through vicarious experience.

If we are concerned about the impact of "In Search of" and "Project UFO," if we suspect these pseudodocumentaries encourage many false ideas among the viewing public, then we should be equally concerned about fiction programs. People know that the plots of fiction stories are not entirely true, however plausible, but they may often assume that the backgrounds of the stories are factual. They know that Mr. Spock of "Star Trek" is not a real person, but they may be encouraged to believe in ESP when they see him perform the Vulcan mind-meld. The effect may be identical to that of hearing the same actor narrate an episode of "In Search of." Fiction, as well as pseudodocumentaries, can convince. Belief may often come from the willing suspension of disbelief. •

The New Disciples of the Paranormal: A Reply to John White

Paul Kurtz

This article was originally written at the invitation of the editor of Human Behavior *as a response to John White's guest opinion piece attacking the CSICP, which appeared in its February 1979 issue. Unfortunately, before this reply could be published* Human Behavior *went out of business. We therefore publish it here in its entirety.—Ed.*

John White, in "Second Thoughts," attacks the Committee for the Scientific Investigation of Claims of the Paranormal, labeling those associated with it as "the new disciples of scientism." His blistering assault, though most unfair, perhaps serves a useful purpose; for it is often difficult for professors of logic to find current examples of logical fallacies: Mr. White committed so many howlers that his article deserves high place in logic texts of the future.

The core of his argument—though it can hardly be called that—seems to be ad hominem inferences about the characters of those associated with the Committee. Instead of dealing with the substantive issues, White accuses the members of the Committee and myself of "prejudice," "high-handed action," "deliberate misrepresentation," "distortion," and "yellow journalism." He concludes his article with a surprising kind of neo-McCarthyism, claiming that there is now a "psychic arms race" between the Soviet Union and the United States and that in view of this "the Committee's actions to block paranormal research take on a sinister character." "Wittingly or not," he warns, "the Committee may be negatively affecting American military readiness."

Paul Kurtz is professor of philosophy at the State University of New York at Buffalo and chairman of the CSICP.

How is one to respond to these criticisms? By insisting that we are not unpatriotic or sinister? By affirming that we are loyal Americans working to maintain American preparedness in any arms race with the Russians? Even a denial of his charges could leave doubt in the mind of the reader about the real motives of the Committee.

Interestingly, the Committee has also recently come under attack from pro-UFO groups. The Committee has an active UFO subcommittee, chaired by Philip J. Klass, that attempts to investigate the "most impressive" UFO sightings. Thus far, we have found no indication that any of these sightings involved extraterrestrial craft or other extraordinary phenomena, and in most cases there are alternative, mundane terrestrial explanations. Many UFOlogists are furious at our skepticism, and some have implied that the Committee is a cover for the CIA and that we are trying to keep real knowledge of UFOs from reaching the public!

Perhaps the best way to deal with all such attacks is to clarify for the record the purposes of the Committee: To examine openly, objectively, and carefully claims of the paranormal. We don't simply *ignore* such reports of the paranormal, as many scientists do, but are willing to investigate them fairly. Contrary to Mr. White's charge, we do not dismiss, debunk, or label all such claims as pseudoscientific. The results of our inquiries thus far have been negative—though we always acknowledge the possibility that we may uncover some new evidence in support of a claim.

It needs to be strongly emphasized, however, that it is not the responsibility of skeptics or scientists to explain the claims put forth by proponents of borderline science or the paranormal. In these fields, as in science generally, the burden of proof is on the claimants. It is their responsibility to come up with reliable, repeatable, and lawful data of the sort that meets scientific standards. Only when and if they can do that is the scientific community or the public obligated to take any notice.

The term *paranormal* was originated by parapsychologists, who used it to refer to a number of concepts and theories introduced in parapsychology that allegedly transcend those of present-day science. Its use has since been extended to refer to a range of alleged anomalous phenomena that likewise cannot be subsumed under the categories of "normal" scientific explanations. Clearly, scientists must always be willing to revise their hypotheses in the light of new evidence. There is no dispute on that point. Unfortunately, the term *paranormal* has been overladen with mysterious, even occult, qualities, and reports of bizarre paranormal phenomena readily arouse either fascination or horror. Moreover, many of the new disciples of the paranormal approach the subject in an antiscientific or pseudoscientific manner and are willing to accept almost anything as gospel truth without sufficient evidence to support it. The

public, inundated by pro-paranormal claims, has generally not had an opportunity to learn about the substantial body of scientific findings that tend to disconfirm them. I fear that the willingness to believe without objective grounds can only contribute to the long-range breakdown of reason in contemporary society.

The Committee's chief aim, then, is to try to provide some balance. We believe that the public ought to hear more than one side of the issue. There are literally hundreds of pro-paranormal organizations and magazines. Individual scientists have occasionally spoken out, but our Committee, as far as we know, is virtually the only organized group providing some dissent against sensationalized claims and encouragement for responsible critical scrutiny. There are, for example, thousands of professional astrologers, and an estimated 1,250 out of 1,500 newspapers carry horoscope columns; the Committee is almost alone in its willingness to examine the claims of astrologers with some critical scrutiny. Regrettably, the paranormal has become big business, funded by many of the largest corporations. For example, Bantam Books, owned by a conglomerate, pours out book after book on paranormal themes—from *Life After Life* to *Life Before Life*. The paperback rights for Linda Goodman's *Love Signs* were sold for almost $2.5 million. A.T. & T. sponsors "Dial a Horoscope," a service that enables consumers in many states to have their horoscopes read over the telephone by Jeane Dixon. Astrologers and psychics hold forth daily on radio talk-shows. NBC and other TV networks air program after program about the "amazing world of psychic phenomena," with little regard for factual accuracy.

In lecturing at universities and colleges throughout North America, I have found that practically everyone knows the astrological sign under which they were born, 80 percent believe in ESP, 60 percent believe in the extraterrestrial origins of UFOs (almost every audience includes someone who claims to have been abducted!), one-third of the students believe in the reality of possession by demons, a similar percentage believe in reincarnation, and approximately 20 percent believe in ghosts. Why should there not be some attempt to provide the public accurate, factual information on these subjects to counterbalance the often distorted and exaggerated claims proponents of the paranormal put forth? Until the Committee was formed, the media and the public had little access to reliable information in this field. Tens of millions of people have simply assumed that the realm of the paranormal has been empirically verified. But this is far from being the case. ESP has not been demonstrated convincingly in the laboratory. Nor has psychokinesis. No more ships and planes disappear south of Bermuda than in any other well-trafficked area of the globe. And the predictions and diagnoses of astrologers have hardly been verified as reliable. The reaction

by the scientific community to the emergence of the Committee has been highly favorable. Only committed devotees of the paranormal, such as John White, have raised objections.

In his *Human Behavior* article, Mr. White attacks the Committee for filing its complaint with the FCC against NBC, under the Fairness Doctrine, for its 90-minute TV special "Exploring the Unknown" (denial of this complaint is now being appealed in the federal courts). The program included twelve segments—all in favor of the paranormal—from psychic surgery and psychokinesis to healing from a distance. It presented scores of paranormal researchers claiming that their findings have been "well established" in the laboratory. The Committee is surely not denying NBC's right to air whatever it wishes; we only ask that on such controversial matters the public be given the benefit of contrasting scientific viewpoints. We maintain that nowhere in the program did the viewer have an opportunity to learn about the serious doubts that most scientists have about such claims. It was that alone to which we objected.

Mr. White deplores our criticisms of "psychic surgery," the claim that certain psychics can perform operations without benefit of scalpel or other instruments and can remove tumors without leaving even traces of scars. He defends psychic surgery and attacks responsible attempts to investigate it. He seriously misrepresents physician William A. Nolen's book *Healing*, a report of the author's investigation of psychic surgery. White says Nolen bases his denunciation of psychic surgery on secondhand information based on interviews with former patients. This is blatantly untrue. Nolen witnessed several operations. He even had himself operated upon. He observed the deception firsthand. Others have also provided good evidence of trickery, and demonstrators have duplicated the effect using sleight of hand, animal blood, and chicken gizzards to represent tumorous organs.

No evidence of any scientific sort has been put forth on behalf of psychic surgery. This, along with obvious evidence of trickery in some operations, is enough to dismiss its claims. Yet I am dismayed that Mr. White apparently believes in its reality. Planeload after planeload of unsuspecting people have gone to the Philippines to seek cures. The FTC heard extensive testimony about the alleged authenticity of such claims, and advertisements for psychic-surgery charter flights have been banned as fraudulent. Mr. White admits that there has been some fraud, yet he apparently still believes that there is "genuine psychic surgery." We challenge Mr. White *to produce evidence of one case of such surgery done under strictly controlled conditions.* Jim Jones, leader of the tragic People's Temple, performed psychic surgery by sleight of hand, and countless gullible onlookers were taken in. Psychic surgery is a serious and contro-

versial matter involving life and death. The NBC network had the responsibility to let the public know that there is important evidence against it. The network did not fulfill this responsibility.

Today, the practice of psychic medicine and faith healing is growing by leaps and bounds. Undoubtedly the placebo effect can in some cases help psychosomatic disorders, but we are not aware of any reliably authenticated physical cures. We believe that the public deserves to know about the dangers of the untested medical practices being foisted upon it by charlatans—that was an important part of our complaint against NBC.

Surely science must be open to new departures in thought and to continuing free inquiry; and it must not prejudge the outcome of such research. New Galileos may be condemned by the establishment, scientific or otherwise. We do not deny that. Yet we must distinguish between the "open mind," which is ready and willing to examine radically new hypotheses and is receptive to new ranges of data, and the "open sink," which is willing to accept anything that is thrown into it by anyone, believing that since it *might* be true therefore it *must* be.

Mr. White confuses the open sink with the open mind. The so-called "leading edge" of the kind of future science that he proclaims is often only the muddled pretensions of pseudoscientists reserving the authority of science for their feeble efforts. Surely we need to be receptive to continuing research. But, we must add, we need coherent theories and repeatable tests performed by independent inquiries before we can accept their alleged results as verified. The excess of enthusiasm expressed by many of the new disciples of the paranormal is especially represented in Mr. White's *Future Science: Life Energies and the Physics of the Paranormal* (coedited with Stanley Krippner for Doubleday). This collection of essays is so full of sheer speculative guesswork that even the respected parapsychologist R. A. McConnell wrote a highly critical review:

> Those who presume to speak for parapsychology often show that they do not understand the difference between *science* and *nonscience*. The distinction can be told in one word: self-discipline. In a well-established field, that distinction is maintained by means of an authority structure. In a pretheoretical field, such as parapsychology, all is chaos. Everyone is free to represent himself to the public as a distinguished and thoughtful leader.
>
> The very existence of a field of science depends upon maintaining a line of demarcation between the professional investigator and the undisciplined enthusiast, between scientific searching and popular fantasizing. The truth of this statement is perhaps nowhere more evident than in a book [*Future Science*] for the layman in which the separating line has been obliterated.

Unfortunately, the editor of the *Journal of the American Society for Psychical Research*, who had commissioned the review, refused to publish

it, saying that it was "unsuitable in content."

Many inquirers in parapsychology and other new fields are interested in doing careful research. We fully support these responsible efforts. Yet side by side with this, and often under the mantle of science, appear the most fanciful untested claims by many of the disciples of the paranormal. It is these that the members of the Committee for the Scientific Investigation of Claims of the Paranormal have scrutinized with a skeptical eye. To damn our concern by labeling it "scientism" is to poison the wells of critical inquiry and to open the door to *nonscience* posing as science. We believe that skepticism about unproved claims is healthy for the future course of scientific investigation. We therefore regret Mr. White's efforts to impugn the motives of those who have expressed their disagreement with the numerous claims made on behalf of the paranormal by its devoted disciples. In the last analysis, the only arbiter of the dispute is the *evidence* itself.

Creativity and skepticism

Scientists are, of course, human. When their passions are excited they may abandon temporarily the ideals of their discipline. But these ideals, the scientific method, have proved enormously effective. Finding out the way the world really works requires a mix of hunches, intuition and brilliant creativity; it also requires skeptical scrutiny of every step. It is the tension between creativity and skepticism that has produced the stunning and unexpected findings of science. In my opinion the claims of borderline science pall in comparison with hundreds of recent activities and discoveries in real science.

—Carl Sagan, *Broca's Brain*, Random House, 1979

UFO or UAA: What's in a Name?

If I ask someone, "What do you think of UFOs?" I am likely to be told whether the speaker believes, or does not believe, that intelligent beings from some other planet, or solar system, or galaxy, or whatever, are flying around in our atmosphere in their own ingenious flying machines.

But that is not quite an answer to the question. I am asking whether there are really things to be seen, in our atmosphere, that are unidentified, or unexplainable by science, things that could not occur naturally. It doesn't matter whether they are engines made by intelligent beings or not.

It seems to be true that the great majority, at least, of UFO sightings can be explained as things that are perfectly well understood. But it may be that a persistent minority have not yet received a rational explanation depending only on nonintelligent forces. There might be such an explanation, but we don't know it in all cases. One possibility is "electrical phenomena, of a nature not yet understood." Among electrical phenomena, ball lightning is reported to do the most extraordinary things; and that something roughly similar occurs occasionally, up in the air, is a natural possibility that cannot be ruled out.

But I am not discussing whether "unknown electrical phenomena" can or cannot explain UFOs. I am asking why it is that when such a question is asked, it seems to lead immediately to the much wider question, "Do you really believe that extraneous intelligent beings are visiting our planet?"

The reason for this seems to lie in the terms in which the question is asked. This is one of those cases where a clumsy phrasing of a question puts misleading ideas into the mind. It is an example of the power of words to falsify thinking.

"UFO" means Unidentified Flying Object. Now what is an *object*? The very word seems to suggest something round, hard, and distinct; *this* object and *that* object, like so many billiard balls. It suggests to the mind that the things seen are of that character. But they might be no more "objective" than, say, mirages seen in the desert. There are plenty of clouds up in the air; they have vague boundaries, and they sometimes merge, or fall apart. Do they qualify as objects?

Even more misleading is the term *flying*. Birds are flying around in the air. So are bats, and many insects. But are clouds flying? No one would say so. The word *flying* then, suggests to our minds an animate (not necessarily intelligent) being. And so the phrase "unidentified flying object" suggests ideas that are irrelevant. The phrase was probably started by members of our Air Force, who like to be able to "identify" any "object" they see as, say, a fighter plane, or a bomber plane, or perhaps a private plane, or a balloon, or even, perhaps, an enemy spy craft.

Now the Air Force personnel have admirable expertise in flying; no one doubts this. But they are not necessarily expert in semantics. They could have used a phrase like "Unexplained Aerial Appearance"—UAA. This would not put into people's minds any preconceived notion that should not be there. But as it is, the phrase Unidentified Flying Object was a psychological disaster, and to ask about it is to ask a question that misleads by the very terms in which it is asked.

UAA *sí*, or "see" (perhaps). UFO no.

—Anthony Standen
Education Subcommittee, CSICP

Anthony Standen is author of Science Is a Sacred Cow *and* Forget Your Sun Sign *and was formerly executive editor of the* Encyclopedia of Chemical Technology.

The Case of the Lost Panda

Hans van Kampen

On a beautiful day in spring a man walked on a small bridge in the shopping center of a rural town in the heart of Holland. He moved along inconspicuously in a crowd of shoppers. Suddenly the man stopped and began staring at the surface of the water. His gestures indicated that there was something going on in the water. Something serious, something of interest. Within a few minutes dozens of people gathered on the bridge and looked over the parapets, but they saw only their reflections on the water's surface.

Is it only curiosity that forms the motive for people to become involved in cases like the man on the bridge? Is this behavior so fundamental that we may conclude that the need to learn is the reason for it? I don't believe so. The behavior of these people revealed that sympathy was also a factor. Those who did not feel the same emotions and share the same associations simply walked by.

A recent development in the Dutch animal world gave the man-on-the-bridge incident an interesting dimension. On Sunday, December 10, 1978, a small panda escaped from his winter shelter in the Blijdorp Zoo in Rotterdam. Since the Chinese improved their relations with the free world by exporting this species, every visitor of a zoo where the *Ailuropoda melanoleuca* is to be seen knows its intelligent and sympathetic nature. So it was predictable that our panda would walk out of his cage to investigate the outer world. This, of course, upset the zoo attendants, who feared for their jobs, and they informed the newspaper *Algemeen Dagblad*. At the very moment this newspaper reported that the panda was lost, it was found dead on a railroad track some 500 meters from its shelter. It appeared to have been hit by a passing train.

Hans van Kampen is a science editor and UFO investigator in the Netherlands.

The readers of the newspaper, unaware of the latest findings, began to react to the article. From all over the Netherlands phone calls came in to the zoo from people who claimed to have seen the panda. Within a few days the zoo received a hundred hints about where to find the lost animal. Since these reports came after the panda involved was dead and buried, it left the zoo staff puzzled. What was responsible for the obvious "panda flap." "Possibly people saw foxes or other misidentified animals," a spokesman for the zoo said. The December 13 newspaper revealed the sad truth about the panda, and this apparently stopped the stream of misinformation into the zoo, since no new reports were received after that story appeared.

It is of interest to know that this panda event happened a few days before a worldwide "UFO flap" occurred. Since the middle of December 1978, researchers of claims about so-called UFOs noticed a drastic increase in UFO reports. Most publicized of these was an occurrence in New Zealand, where, in the middle of the summer, nocturnal lights were seen low over the horizon and high in the sky. As we remember from our man-on-the-bridge incident, suggestive behavior may arouse curiosity and sympathy. When the newspapers began publishing reports about the New Zealand UFOs and after the film made in New Zealand by Quentin Fogarty was shown on television, many people throughout the world were inspired to look up and see. In South Africa, Mrs. Meagan Quezet claimed that she and her son had suddenly met five or six alien beings "to whom I tried to communicate." In Italy, a "UFO" seen near Gran Grasso was allegedly engaged in damaging a power plant.

On December 27, 1978, I was called by the Dutch Federal Police of the Dordrecht area to investigate simultaneous observations of an apparently unexpected light in the southeastern sky. Due to the early hour of the call—about 6 A.M.—it immediately occurred to me that this was a brilliant opportunity to demonstrate to the Dutch police force the true nature of the phenomenon and the fallibility of "experienced eyewitnesses" and human perception. Since I own a well-equipped research center for the study of "UFOs," I could lock into the police communications system and talk directly to the officers involved. From three different locations, separated from each other by many kilometers, observations were reported of a slowly moving, bright nocturnal light. Some police officers claimed to see the light coming closer and fading again, while others at different moments saw the light going up and down. All agreed, however, in seeing the "UFO" over the southeastern horizon. Within an hour and a half it was possible to convince these police officers that they had seen the bright planet Venus, which was at the indicated position and appeared and disappeared behind some cloud banks. Also, the crescent of the waning moon added to the

"peekaboo" effect of that particular morning. At dawn, everyone could see exactly what had happened.

The result was that I was invited to write an instructive article about "UFO" phenomena for a police newspaper.

This case revealed the factor of basic human curiosity, which I translate as the need to learn and experience combined with the "sympathy" factor of sharing feelings and associations. By guiding this sympathy toward a skeptical and sound attitude, every individual observer got the opportunity to add to the final conclusion—that the sighting had been caused by the misinterpretation of a natural phenomenon—without losing face afterward. This Netherlands Federal Police case was, in fact, the perfect case. There is no doubt in my mind that if serious "UFO" researchers could work on the spot at the time of the sighting, preferably amidst the observers, "UFOs" would no longer exist. Unfortunately that goal seems as elusive as "UFOs" themselves. •

Prejudice and "post-judice"

Prejudice means literally pre-judgment, the rejection of a contention out of hand, before examining the evidence. Prejudice is the result of powerful emotions, not of sound reasoning. If we wish to find out the truth of a matter we must approach the questions with as nearly open a mind as we can, and with a deep awareness of our own limitations and predispositions. On the other hand, if after carefully and openly examining the evidence, we reject the proposition, that is not prejudice. It might be called "post-judice." It is certainly a prerequisite for knowledge.

Critical and skeptical examination is the method used in everyday practical matters as well as in science. When buying a new or used car, we think it prudent to insist on written warranties, test drives and checks of particular parts. We are very careful about car dealers who are evasive on these points. Yet the practitioners of many borderline beliefs are offended when subjected to similarly close scrutiny... Where skeptical observation and discussion are suppressed, the truth is hidden.

—Carl Sagan, *Broca's Brain*, Random House, 1979

Edgar Cayce: The Slipping Prophet

James Randi

When all else fails to convince the unbeliever, promoters of the paranormal fall back on the Sleeping Prophet, Edgar Cayce (pronounced Kay-see), who is credited with having given medical diagnoses of far-distant persons, with little or no information available to him, and "life readings" of people, when he was given only their names, describing their former and present lives. He claimed that it was all done while he slept and that he did not remember a word of what he had said while "in trance." The Association for Research and Enlightenment is the result of his wonderful work, and its library, with some 14,000 case histories, is great material with which to regale the credulous. In fact, the rationalizations that Cayce and his supporters gave for his notable failures are prime examples of the art.

Of course Cayce is remembered for his successes, not his failures. Disciples claim many thousands of verified "wins" in which the master psychic correctly diagnosed illnesses and prescribed cures. But *did* he? I refer readers interested in doing some original research to any of the many books about the Sleeping Prophet. It must be said of Cayce's followers that they are quite unashamed of the myriad half-truths, the evasive and garbled language, and the multiple "outs" that Cayce used in his readings. In some cases, these crutches are clearly stated, without any attempt to suppress them. But such is the belief of the zealot, that no matter how damning the evidence of the documents, faith marches on undaunted.

Cayce was fond of expressions like "I feel that" and "perhaps" to avoid positive declarations. It is a common tool in the psychic trade. Many of the letters he received—in fact most—contained specific details about the illnesses on which readings were required; the quest was for a cure.

Excerpted from the new book *Flim-Flam: The Truth About Unicorns, Parapsychology and Other Delusions*, by James Randi (T. Y. Crowell, 1979).

There was nothing to stop Cayce from knowing the contents of the letters and using that information as if it were divine revelation. To one who has been through dozens of similar diagnoses, as I have, the methods are obvious. It is merely a specialized extension of the "cold reading" technique of the fortune-tellers.

His "cures" themselves are pretty funny, as you will see from an example I will quote. He just loved to have his patients boiling the most obscure roots and bark into nasty syrups. Perhaps the therapy was based on nauseating the victim so much that the original illness was forgotten. And it is no surprise that his cures are quite similar to "home remedies" described in the kind of handy medical encyclopedias that the late 1800s produced for the bedsides of every rural home. Beef broth was a favorite remedy with Cayce, for such diverse diseases as gout and leukemia. Who can fault a nice man who prescribes a cup of broth?

But were there actually cures from all this? The case is a hard one to prove, either way. First, the verifications that come back from patients hardly represent the whole. Remember that dead patients cannot complain; and for those who have not been cured, it serves little purpose to write back and grumble. After all, this good man has tried to help them, and just because it didn't work in one case is no reason to knock the process. As for those who wrote and affirmed cures, there is an important factor to consider. I'm sure that you've heard the bit about the man who is found yelling at the top of his lungs in the park. Asked why, he replies that such a procedure keeps rogue elephants away. "But," counters this questioner, "there are no elephants around here for a thousand miles!" "See how well it works?" is the triumphant reply. The point is that just because Cayce prescribed a boiled root drink does not mean that that nostrum achieved the cure reported. Nor can we forget that many of the illnesses described to physicians are totally imaginary or self-terminating ones.

But can the skeptics prove that Cayce's cures are attributable to ordinary causes? It would require a huge expenditure of money to do the necessary research for such a job, and in most cases the information would not be available anyway. Frankly, the vague, evasive, and simplistic diagnoses and cures that Edgar Cayce is credited with hardly need such research. Examination of the record at hand is quite sufficient to deny him sainthood. The large and well-funded organization that bears his name today survives as a result of preferred belief, not because of any adequate proof.

In a revealing book titled *The Outer Limits of Edgar Cayce's Power*, written by E. V. and H. L. Cayce, his notable failures are excused in typical fashion. The authors strongly assure us that the book, though it admits the failures, explains all of them quite satisfactorily. But I'll let you judge for

yourself. Here, with the Cayce verbiage stripped away to the bare facts, is what they give us as an exercise in credulity.

The Hauptmann/Lindbergh case was a big boo-boo of Cayce's. These are the points he developed while in a trance:

1. The baby was removed at 8:30 from the Lindbergh home by one man. Another man took it, and there was a third person in the car.

2. The baby was taken to a small two-story brown house in a mill section near New Haven called Cardova. The house used to be green.

3. Schartest Street is mentioned, also Adams Street, which has had its numbers and name changed.

4. The house is shingled. Three men and one woman are with the child. The woman and one man were actually named.

5. The child's hair has been cut and dyed.

6. Cardova related to manufacturing of leather goods.

7. Red shale and new macadam road on "half-street" and "half-mile" are mentioned.

8. The boy has been moved to Jersey City and is not well.

9. Hauptmann is "only partly guilty." Cayce asks for "no publicity on this case."

Well, that's quite a bunch of facts, is it not? Unfortunately, they are all wrong. True, Adams Street was found, and it had been named only a few weeks previously. But this information was available to Cayce during one of his rare waking periods. Besides, Adams Street proved a dud. Said Cayce when confronted with the facts: "I've always had my doubts about anything very authentic in such matters." Well, so have I, Ed, more than ever before after examining your record. But we should give the disciples (and Cayce) a chance to rationalize this one, so here goes with a list of their excuses: (1) The readings picked up the mental plans of *others* who had *also* planned a kidnapping of the Lindbergh baby. (Poor psychic aim.) (2) Thought patterns of others involved have distorted the readings. (3) Mental static was very heavy.

No wonder Cayce asked for no publicity. It was a real fiasco, and he had psychic egg on his face. But these excuses are accepted as quite legitimate by the believers—to this day.

But there are more surprises for us. Cayce even gave diagnoses of cases when the "patients" were *dead*! How could that be? Surely, dead is a very serious symptom, and should be detectable. But we have failed to take into account the ingenuity of the breed, as we will now see in two examples.

Cayce gave a reading on a Monday for Theodoria Alosio, a child who died of leukemia on Sunday, the day before. He gave a long and typical diagnosis, with a long and complicated cure involving diet. An example of the "reading" will suffice to show just how lucid and informative it is: "And

this depends upon whether one of the things as intended to be done today is done or isn't done, see?" No, Eddie, I'm afraid I don't see at all.

The defendant deserves a chance at alibis, however, and we'll take a look at these in the case of the leukemia victim, which was diagnosed by Edgar Cayce with a lady aide, "conducted" by her cousin, recording the details. These are the alibis: (1) The person who sought the reading was not related to the child. (2) Only the child's mother had "an open mind." (3) The doctor in charge was not told about the reading. (How about the *coroner?* Yet what could either of them have done for the child even if they had known? The child was *dead*!) (4) There was "conflict between the recorder and her cousin at the time of the reading." (5) The steno recording the details was thinking about *another* little girl at the time. (6) The reading was given in reverse order, the physical check preceding the prescription. (Then, I ask, why didn't the great psychic detect *death* and skip the prescription?) (7) Cayce had been given a newspaper clipping for the week before, and had given a reading for *that* date. (8) The reading was given *on the condition*, not on the child herself. (9) Reading was given on "the period of seeking," not on the moment at hand. (10) In Cayce's own deathless words: "If the proper consideration is given all facts and factors concerning each character of information sought, as has been given oft, the information answers that which is sought at the time in relationships to the conditions that exist in those forms through which the impressions are made for tangibility or for observation in the minds of others." (11) The reading given can be useful "for the next case." (12) Nothing can be done except as God wills it. (Poor God, left holding the bag again.) (13) The desire of the party was for a spectacular cure. (14) Leukemia is the focus of the subconscious, rather than the child. (15) The attitudes, desires, purposes, and motives of the patient and the person conducting the reading had a bad influence.

Is that enough rationalization for one big boo-boo? Apparently it is, for the Cayce folks have accepted it. But let me regale you with one more example of Cayce's medical prowess. For another *dead patient*, Cayce prescribed the following noxious mixture: Boil together some wild cherry bark, sarsaparilla root, wild ginger, Indian turnip, wild ginseng, prickly ash bark, buchu leaves, and mandrake root. Add grain alcohol and tolu balsam to the mess, and give it—during waking periods was specified—for 10 days. I've consulted my own (nonpsychic) physician, and he commented that such a mixture just *might* raise the dead. And note the preponderance of "wild" ingredients. How basic and natural it all sounds.

Rationalization time again. Say the disciples about this case: (1) No definite appointment was made for this reading. (2) The conductor of the reading held the letter—written while the patient was alive—in her hand

during the reading. (3) The patient herself did not request the reading, thus a lack of direct need from her. (4) Cayce was emotionally upset that day.

I am reminded of the old story wherein the lady at the funeral calls out, "Give him some chicken soup!" Told that such a remedy would not help at this late stage, she correctly replies "Well, it couldn't *hurt*." More grist for the believer's mill.

In a valiant attempt to prove Cayce's batting average in his "readings," the authors of *The Outer Limits of Edgar Cayce's Power* did a jolly bit of research at the association's library at Virginia Beach. They selected, at random, 150 cases from the files, and tabulated them. Their findings, they reported, showed *more than 85 percent successes* for Cayce, verified by actual reports of the cured patients! Quite impressive, if true, and certainly indicative of some marvelous psychic powers. But again, as you might have suspected, close examination shows a somewhat different conclusion.

They listed them thusly:

No reports made	74	50%	(actually 49.3%)
Negative reports made	11	7%	(actually 7.3%)
Positive reports made	65	43%	(actually 43.3%)
	150	100%	100.0%

Then, they reasoned, since the "no reports" portion was impossible to judge, this got discarded, and the final table looks like this:

Negative reports	11/76	14.4% (actually 14.5%)
Positive reports	65/76	85.5%

So the results are rather remarkable, by *their* figuring. If I hear cries of "Unfair!" about now, I fully concur. And I object as well to the specialized terminology they use to describe the 11 negative reports. They are not called "failures" or even "errors"—they are referred to as "considered inadequate."

But we need to look into these figures even further, as did the two writers we are quoting. They tell us that 46 of these 150 persons *were present* at the readings; and of those remaining who were not present, 35 did not give any information in their letters appealing for help. Thus, 69 persons of the 150 *did* give information to Cayce. Now, you and I would

agree, I'm sure, that prophet Edgar Cayce, with the patient present, has a much greater chance of telling something about the illness involved, as well as about many other factors that can surely be worked into the "reading" as evidential. So in a total of 115 (46 + 69) of the 150 cases, it was possible to make excellent statements about them, and probably get a "positive" report thereby. That's a big 76.6 percent, friends.

Another point: Why did the 74 cases *make no report?* Remember, they almost *had* to be believers in Cayce to ask for a reading. It was their lives they were dealing with. Does anyone seriously think they would respond with a negative report? *Or fail to send in grateful thanks and affirmation for a success?* Not very likely! So, we may safely assume that the majority of the 74 "no report" cases were *not* successes—pardon me, were "considered inadequate."

Even if we are exceedingly liberal with these folks and give them 50 percent of the 74 "no reports" as "positives," their 85.5 percent suddenly shrinks to 68 percent. But I refuse to do that, because I maintain that my argument on the probable reasons behind the "no reports" is correct. They are stuck with a bad analysis: and to make it worse, in their book they proceed to multiply this sample of just over *one percent* of the data by 100 to arrive at totally misrepresentative figures.

My own (admittedly amateur) analysis says that only 23.3 percent of the sample has any hope of being demonstrably positive at all; and knowing the criteria and the quality of the data, that small percentage shrinks even further.

Before we leave the Sleeping Prophet to his permanent nap, it would be well to deal with one other of his supposed powers, one which is always thrown up in discussions as a heavy proof of his abilities. There is one field—locating buried treasure—that would seem to be safe against most fraud or second-guessing. After all, if a "psychic" can locate long-lost or long-secreted treasure, fakery seems impossible. In his attempts at this miracle, Cayce took no chances. He called in Henry Gross, the famous dowser who put his forked stick to work along with Cayce's powers to find purported millions in jewels and coins buried along the seashore. It was a little like setting out to sea in a leaky boat, then at the last minute throwing in some cast-iron life-belts.

Presumably, Edgar Cayce dozed while Henry Gross dowsed, wearing out several sticks in the process. They dug up tons of mud, sand, and gravel, looked under rocks, and in general disturbed the landscape something awful. No treasure. Weeks of work gave them only blisters. How could such a powerful team of psychic plus dowser fail to locate the prize? Rely on the alibi-manufacturers to come up with something suitable: (1) The psychic impressions were picked up from the spirits of departed

Indians and pirates, and such undependable types are known to want to play jokes on the living. (2) Maybe the treasure *was* there, but had been removed. Cayce was reading in the past again. (3) There were doubts, fears, and cross-purposes at work among the seekers. (4) Were the directions Cayce gave based on readings from "true" North, or compass North? (5) Was the information given to Cayce meant for digging *now*, or another time? Perhaps in the *future*?

Well, there it is. The matter of Edgar Cayce boils down to a vague mass of garbled data, interpreted by true believers who have a heavy interest in the acceptance of the claims. Put to the test, Cayce was found to be bereft of real powers. His reputation today rests upon poor and deceptive reporting of the claims made by him and his followers, and such claims do not stand up to examination. Read the literature, with these comments in mind, and the conclusion is inescapable. It just ain't so. •

Something more amusing than truth

My point is that, despite all this extravagant frenzy for the truth, there is something in the human mind that turns instinctively to fiction, and that even journalists succumb to it. A German philosopher, Dr. Hans Vaihinger, has put the thing into a formal theory, and you will find it expounded at length in his book, The Philosophy of As If. *It is a sheer impossiblity, says Dr. Vaihinger, for human beings to think exclusively in terms of the truth. For one thing, the stock of indubitable truths is too scanty. For another thing, there is the instinctive aversion to them that I have mentioned. All of our thinking, according to Vaihinger, is in terms of assumptions, many of them plainly not true. Into our most solemn and serious reflections fictions enter—and three times out of four they quickly crowd out all the facts....*

What ails the truth is that it is mainly uncomfortable, and often dull. The human mind seeks something more amusing, and more caressing.

—H. L. Mencken, *The Chicago Tribune*, July 25, 1926 (Also in Mencken's *The Bathtub Hoax and Other Blasts & Bravos*, New York: Knopf, 1958), a response to the credulous acceptance of a fictitious history of the American bathtub Mencken had written as a spoof in 1917.

Book Reviews

The Philadelphia Experiment: Project Invisibility. By William A. Moore in consultation with Charles Berlitz. Grossett & Dunlap, New York, 1979. $10.00.

Reviewed by Larry Kusche

The Philadelphia Experiment, subtitled "An Account of a Search for a Secret Navy Wartime Project That May Have Succeeded—Too Well," is a more interesting and thorough book than I thought it would be when I saw the first trade-journal ads several months before publication date. Frankly, Berlitz's *Bermuda Triangle* and *Without a Trace* were quite dull; I have yet to talk to anyone who has read either one completely. Primarily rehashes of previously rehashed tales culled from various books, the *National Enquirer*, *Saga*, *Argosy*, and similar storehouses of knowledge, true or otherwise, they were insults to the intelligence of the average fourth-grader. Principally because of Berlitz's unflagging reliance on easily disproved information, paranoid reasoning, and blindness to logic and to any answers that were less than spectacular, I did not expect much from *The Philadelphia Experiment*; but it is a level above Berlitz's previous books, apparently because Moore seems to have done most of the work. *TPE* is, for the most part, reasonably intellectually honest, a quality totally lacking in the previously mentioned books.

Having done years of similar research—tracking down people, documents, and other sources of information many years after the fact—I can appreciate the time and effort Moore has put into this book. I have also done a fair amount of research on the alleged Philadelphia Experiment, and have located some of the same people and sources that Moore has. Yet I have come up with information that is a bit different from his, and conclusions that are radically different. I found the story of the *search* for the information for *TPE* to be far more interesting than the information itself. If the case for the Philadelphia Experiment were tried in court, the judge would demand something more substantial than what Moore found. The case, as it stands, would quickly be dismissed because of the lack of good evidence.

The alleged experiment, for anyone who is not yet aware of this old chestnut, is an alleged attempt by the U.S. Navy in 1943 to cause a destroyer to become invisible. The "experiment" did not seem to be known by anyone until more than 12 years after it was supposed to have occurred, when Morris K. Jessup, author of *The*

Larry Kusche is the author of The Bermuda Triangle Mystery—Solved. *He is currently at work on another Bermuda Triangle-related book.*

Case for the UFO, received several strange letters from someone who used the names Carlos Miguel Allende and Carl M. Allen. Allende told of witnessing the destroyer vanish and the horrendous effects suffered by the crew. Jessup paid little attention to the letters until he was contacted by the Office of Naval Research. Someone had sent ONR a copy of Jessup's book, with "annotations which seemed to imply that the writer of them possessed intimate knowledge of UFOs, their means of propulsion, origin, background, and history." Because of the use of different colored inks, and for other reasons, it was assumed that three poeple had done the annotations, passing the book back and forth between themselves. Jessup recognized the writing style and was convinced that Allende/Allen was one of the annotators. (Moore is certain there was only one annotator—Allende.)

What bothered Jessup was not so much whether the annotations were true or not, but that ONR found them worth checking into. Not only was ONR interested, but a private firm heavily involved in "space-age military research" contracts, the Varo Corporation of Garland, Texas, became so interested that they produced a number of copies of the book, annotations and all, for distribution among engineers, scientists, and Navy officials. If Allende were merely another kook (and everyone who writes about fringe subjects such as UFOs and the Bermuda Triangle gets piles of kooky letters—you should see some that I have received), the Navy and Varo would not have been so interested, the reasoning goes. In fact, over the years, the interest shown by ONR and Varo has been one of the main factors lending credence to the possible validity of the alleged invisibility experiment. This, at least, seems to be the reasoning in the minds of some of those who think "the experiment" occurred, or would like to think it occurred, and are looking for support for it.

Since the ONR's and Varo's interest has given the matter some sort of pseudocredibility over the years, I pursued the matter to see, first, if there had actually been an annotated copy sent to ONR; then, if they had actually been interested; and then, if Varo had made copies, why? Then, if it all had indeed occurred, was it because anyone thought there actually was anything to the story of the disappearing ship? Although Moore did do a lot of research on the alleged experiment, he did not delve into it to any depth from this angle.

The chief officer in ONR who was interested in the annotations was then-Commander George W. Hoover, the Special Projects Officer. It took some doing, but I did manage to locate him and ask about his thoughts on the alleged invisibility experiment. Hoover does not especially care to talk about the subject anymore. It has become a plague to him over the years because it has taken up so much time, and because he has been misquoted so many times. However, he told me that the story of the alleged Philadelphia Experiment "has gotten completely out of hand. There's absolutely nothing to it," he said. The reason for his interest in the annotations was because, as ONR's Special Projects Officer, it was part of his job at the time, to peruse many publications, as, we could assume, ONR and other scientific organization do continually. Some publications may lead to something worthwhile, others may not. Hoover's final opinion on the annotations, and on the subject of the invisibility project, was that there was nothing of substance to any of it.

I also pursued the matter through the Varo Corporation, to see why they spent what would obviously be a fairly substantial amount to reproduce the Jessup book and its annotations. I located Jack G. Smith, who was the vice-president of research and development when the reprint was done. After telling me how amused he was by the continuing developments in the story, he said that Varo had become

involved because of the personal interest of the then-president, Austin N. Stanton, who had learned of the book from Hoover while visiting ONR to discuss contract work. In the 1950s many engineers and scientists had not yet made up their minds about the reality of UFOs. Many of those at Varo were interested in UFOs basically as a lunchtime hobby, as others might play chess or debate the dangers of communism. Because the annotations were such a jumble that no one could make any sense of them, Stanton hired a high school girl to type them after school. Smith said that the project probably cost the grand total of a few hundred dollars. Copies were mimeographed and sent to various scientists and Navy officials, and the eventual conclusion of all concerned, including the men at ONR, was that the annotations made no sense at all. They had not the least trace of scientific merit. Least of ONR's or Varo's interest was the alleged Philadelphia Experiment. Also, it was at Varo's request that ONR had talked to Jessup. Since Jessup was in Washington at the time, he was more convenient to the people at ONR than he was to the Varo people in Texas.

"The mistake we made," Smith told me, "was that we put our corporate name on the cover. Copies somehow started to circulate among lay people, and because Varo was a recognized research corporation, they thought the annotations had some substance."

When I talked to Stanton, he said basically the same thing as Smith, adding that those who believe that the alleged Philadelphia Experiment did occur are naive and have good imaginations. Neither Stanton nor Smith recalled having been interviewed by either Moore or Berlitz.

The limited space allotted to a book review does not allow me to comment in as much detail as I would like on matters in *The Philadelphia Experiment*. As I previously mentioned, Moore *has* spent a lot of time doing research, and much of his analysis of the factors is very good. But some of his logic could be more rigid. While keeping a seemingly objective stance in some parts of the book, in other places he seems convinced that the alleged experiment definitely did take place. Then, before long, he appears to be weighing the matter again.

One example of poor logic is on page 99, where he notes that the *Eldridge*, the destroyer purportedly involved, when sold to Greece in 1951, had lost some 660 tons of weight. What was removed? Moore suggests electronic equipment (of the type that might cause invisibility). Why did he not suggest guns and other implements of war?

Moore suggests that whatever happened to the destroyer might be tied to the "strange series of events and disappearances that seem to plague... the Bermuda Triangle," where, he says, we find or suspect the presence of electromagnetic clouds, craft stuck in time, and other dimensions of time and space. This suggests either that he has not read my 1975 book, *The Bermuda Triangle Mystery—Solved*, which showed the poor evidence and hypocrisy that led to the creation of that manufactured mystery, or he chose to ignore my information, or he let Berlitz write that part of the book. None of these alternatives are excusable for one who claims to be a skeptical researcher.

TPE includes discussions of "the Einstein Connection"; Carlos Allende, the writer of the letters and annotations that started the whole story—about as unstable a character as anyone could hope to meet; the logs of the ships involved, which Moore concludes were falsified; an interview with a now-deceased "Dr. Rinehart," a pseudonym for a scientist who regularly used another pseudonym that had been inspired by a road sign, who "personally verified the substantial truth of

Allende's statements." A long interview with "Rinehart," says Moore, "tends to reinforce the possibility that there was indeed a project in the works that could easily have developed, and very possibly did, into something of the magnitude of the Philadelphia Experiment." Quite tentative, it seems. The book also discusses the "force fields" of Townsend Brown, and many other circumstantially related topics.

The Philadelphia Experiment has a healthy dose of paranoia, of establishment coverups for the sake of mankind, as do all books of this nature. For example, one man who was ready to bankroll a study of force fields met his "convenient demise" when his private plane reportedly struck a high-tension wire. Berlitz supposedly attempted a "discreet but thorough inquiry" at one undisclosed source, but was "coldly informed" that the story was all imaginary. Would he have believed what he was told had he been warmly informed? (Several years ago, through an official at a Massachusetts bank, I challenged Berlitz to provide reliable proof for the existence of an alleged man-made pyramid that he claimed was underwater in the Bahamas. Berlitz later said that the bank had attempted to pressure him in the matter. The pressure? They asked him to respond, yes or no, to the challenge by a given date, several weeks ahead. Paranoia of the third kind. Not surprisingly, he declined to accept the offer.)

More paranoia: Berlitz reports that he attempted to discuss the subject with officials at the Varo Corporation, who told him they would not discuss it in any manner. When I had called them, however, they were extremely friendly and willing to discuss it openly. They said "the experiment" is absolute nonsense. Perhaps a negative answer is Berlitz's idea of "not discussing something." Perhaps Berlitz never even called them. The men I talked to had not heard from him.

An example of the "evidence" given to support the possibility of the experiment is an "all-important" article that Allende had said would back up his story. It was about a fight in a tavern in which two sailors "just sort of vanished into thin air... and I ain't been drinking either," as the waitress scientifically put it. Well, whoopeedoo. I have a ten-year-old son who, every time I get ready to take him somewhere, disappears, only to rematerialize blocks away on his bicycle, seemingly without knowing how he got there, and with no memory that we were about to leave. Time warp, or...?

TPE obviously took a long time to research. Much of it is interesting and well thought out, but there is not the faintest smidgeon of *substantial* evidence that the incident ever occurred. It is not a difficult matter to provide circumstantial evidence to support *any* contention. There are people who are certain that Tolkien's Middle Earth is real. Surely, they could find some evidence that it is. Besides, science has yet to disprove it.

It is frequently said that absence of evidence is not evidence of absence. But there comes a time when the continuing absence of evidence makes the phenomenon appear to be all the more likely to be absent.

The oddest line in *The Philadelphia Experiment* is the last one, which, I suspect, Moore probably already regrets using: "If the Philadelphia Experiment never happened as described, what actually *did* happen in a high-security area of the Philadelphia Navy Yard in October 1943?" Not surprisingly, in an interview, Moore credited the line to Berlitz. It is a very strange statement to make after 162 pages of "evidence" that supposedly shows that the alleged experiment did actually take place. But then, Berlitz's creations have always been gold mines for people who pan for nuggets of nonsense and illogic. This one, thanks to Moore's labor, is

far more intelligent, but there still is nothing more than the flimsiest of circumstantial evidence to back up the claim that a destroyer ever became invisible.

As the last line asked, if the "experiment" never happened as described, what actually did happen? Obviously something else, and the whole invisibility business is part misinterpretation, part hoax, and part show biz. How much of each is anyone's guess. I can hardly wait for the movie. •

Understanding Scientific Reasoning. By R. N. Giere. Holt, Rinehart & Winston, New York, 1979. 371 pp. $14.95.

Reviewed by I. W. Kelly

The publication of a book aimed at teaching college-level students to be more critical consumers of scientific information will be welcomed by SKEPTICAL INQUIRER readers. The individual who works his way through this book will emerge with a formidable arsenal of reasoning skills. Giere introduces the reader to these skills in a logical sequence, graduating from basic skills, such as recognizing valid and invalid deductive logic patterns, to values and their role in decision-making. In addition, each chapter contains an excellent set of exercises (with answers to many of them at the back of the text) that provide feedback to the student regarding his understanding of the chapter.

The book is divided into four sections: Part 1 ("Basic Concepts of Scientific Reasoning") introduces the reader to such concepts as *truth, falsity, contradiction, tautology, belief, knowledge,* and *certainty.* In addition, there are chapters on inductive and deductive arguments and on the justification of such reasoning. These terms and patterns of argument provide a basis for understanding the sections that follow.

Part 2 ("Reasoning About Theories") expounds the distinction between two main types of scientific hypotheses, theoretical and statistical. From examples taken from the physical and biological sciences, the reader learns how theoretical hypotheses may be justified or refuted. The last chapter of this unit introduces the reader to various fallacies of theory-testing with examples from the paranormal: The Delphi fallacy (vague predictions), the Jeane Dixon fallacy (multiple predictions), the Patchwork Quilt fallacy (no predictions), the ad hoc rescue (failed predictions), and circumstances where attempts to justify a theoretical hypothesis by elimination fail. The fallacies cited are taken from claims of clairvoyance, precognition, conspiracy theories, astronauts from outer space, and UFOs. The unit ends with an excellent set of arguments, taken from proponents of astrology, pyramid power, gods from outer space, UFOs, and reincarnation, for the student's critical examination.

Part 3 ("Causes, Correlation, and Statistical Reasoning") examines the distinction between correlation and causation and the justification of statistical and

I. W. Kelly is an assistant professor in the Department of Educational Psychology at the University of Saskatchewan.

causal hypotheses. The reader works through issues of everyday concern, such as saccharin and cancer, tobacco and health, and blood clots and the pill. These issues are tied in with notions of adequate experimental design to rule out alternative hypotheses.

Part 4 ("Values and Decisions"), the final section, deals with judging the relevance of scientific findings to both personal and public decisions. This section provides the reader with various strategies for producing the "best" decision in a variety of situations.

Giere states that the objective of this book is "to help beginning students to learn to evaluate and utilize scientific information" (p. iii). He provides the resources so that this objective can be met, and he presents the material clearly and cogently. The book was produced as a response to students' demands for "relevance." It is this reviewer's contention that Giere has written a book that goes a long way toward this end.

Some Recent Books

A listing here does not preclude a detailed review in a future issue.

Bainbridge, Williams Sims. *Satan's Power: A Deviant Psychotherapy Cult.* Berkeley: University of California Press, 1978, 312 pp., $14.95. Intriguing ethnographic study of a Satanic cult based on the author's first-hand observations of its activities over a six-year period.

de Mille, Richard. *Castaneda's Journey: The Power and the Allegory,* 2nd ed., rev. Santa Barbara: Capra Press, 1978, 205 pp., $4.95, paper. Updated revision of de Mille's much-acclaimed exposure of Castaneda as a clever hoaxer, with a newly written preface commenting on reactions to the revelations.

Gauquelin, Michel. *Dreams and Illusions of Astrology.* Buffalo: Prometheus Books, 1979, 158 pp., $14.95. First English translation of a study of the commercial use and abuse of public gullibility by popular astrologers and horoscope makers. Final chapter outlines the Gauquelins' own controversial claims of a planetary-birth link. With a foreword by astronomer George Abell.

Sagan, Carl. *Broca's Brain: Reflections on the Romance of Science.* New York: Random House, 1979, 347 pp., $12.95. Twenty-five essays on diverse topics of science and philosophy in Sagan's lively and thoughtful manner. A 104-page section on "The Paradoxers" provides welcome critiques of a variety of borderline-science claims, and a final chapter speculates on psychological links between the birth experience and reports of near-death experiences. Throughout, Sagan eloquently affirms the joy of science and the value of rational, scientific inquiry in deciphering the universe's mysteries.

—*K.F.*

Articles of Note

Following is a sampling of recent articles that critique paranormal or fringe-science claims or report on them in a responsible way.

Arnold, Gary. "Back on the Backwoods Trail of the Ever-Elusive 'Sasquatch.' " *Washington Post*, January 30, 1979, p. B9. A critical review of the movie *Sasquatch*. "Like the similarly cheapskate, slipshod, pseudoscientific exploitation movies about UFOs, the Bermuda Triangle, the Lincoln assassination or the end of the world, the Bigfoot sagas are a self-perpetuating con ... The procedures of these stale revivals of the doomsday or Bigfoot charade would be out of business instantly if they ever presumed to take a scientific approach to their subject matter."

Bartlett, Kay. A lengthy Associated Press feature article, datelined Seattle, about the people promoting and arguing with each other over claims of Bigfoot or Sasquatch. Appeared in various newspapers under such headlines as "The Continuing Sasquatch Debate..." (*Washington Post*, Feb. 18, 1979, p. G6) and "Sasquatch Hunters Find Each Other 'Fair Game' " (*Albuquerque Journal*, Jan. 28, 1979, p. B7.)

Carter, Luther J. "Creationists Sue to Ban Museum Evolution Exhibits." *Science*, 204, June 1, 1979, p. 925. Brief report on the suit by a small creationist group seeking to have all exhibits on evolution removed from the Smithsonian's Museum of Natural History.

Cowen, Robert C. "Detectives for the Paranormal." *Technology Review*, May 1979, p. 10. A call for tough scientific examination of claims.

_____. "Explanations of the First Kind." *Technology Review*, March/April 1979. p. 10. Natural explanations for UFO phenomena.

Gagliardi, Carl S. "The New Age of Gullibility." *Boston Globe*, February 11, 1979, p. A1. A report on the rise of public credulity in pseudoscience.

Galston, Arthur W., and Clifford L. Slayman. "The Not-So-Secret-Life of Plants." *American Scientist*, 67, May-June 1979, pp. 337-344. Scientific review and critique by Yale professors of botany and physiology on the historical and experimental myths that led to the fallacious claims of perception by plants.

Gardner, Martin, "Quantum Theory and Quack Theory." *New York Review of Books*, May 17, 1979, pp. 39-41. Background to J. A. Wheeler's decision to speak out at AAAS annual meeting against the affiliate status of parapsychologists. Followed by full text of Wheeler statements.

_____. "How to Be a Psychic, Even if You Are a Horse or Some Other Animal." Mathematical Games column, *Scientific American*, May 1979, p. 18. Description of a few of the many ways fake psychics can boost their odds when they work with playing cards or ESP cards.

Gould, Stephen Jay. "Piltdown Revisited." *Natural History*, March 1979, p. 86. Gould's own speculations about the Piltdown hoaxer and a discussion of four categories of reasons for the hoax's easy acceptance: "the imposition of strong hope upon dubious evidence," "reduction of anomaly by fit with cultural biases," "matching fact to expectation," and "prevention of discovery by practice."

Greenberg, Joel. "Close Encounters: All in the Mind? *Science News*, Feb. 17, 1979, 115:106-107. Discussion of research using hypnosis, which has found

surprising parallels between UFO "abduction" reports and hallucinatory sequences triggered by drugs or near-death experiences.

Knutzen, Eirik. "Is Business Taurish on Astrology?" *TWA Ambassador,* 12, (5), 1979, pp. 49-51. Not especially critical but included here for its documentation of the extent to which some businessmen use astrology for advice on hiring and firing, timing of deals, and investment strategy. "I've been hiring my staff by astrological signs since I went into publishing after the war," relates one fashion-trade publisher. "All my writers, photographers and artists are Fire signs. The sales people are Air signs... I won't hire anybody under Water signs." The article quotes a New York astrologer: "There is no doubt in my mind that billions of dollars change hands every year based on astrological data."

MacRobert, Alan M. "A Skeptic's Guide to Pseudoscience." *The Real Paper,* Boston, February 3, 1979. Also reprinted in other city newspapers such as Baltimore *City Paper* (April 6) and *Twin Cities* (Minn.) *Reader* (April 6). A lengthy, personal, hard-hitting guide on how to spot hokum. "Never has discussion of the 'paranormal' come so far out of the closet, but never has so much garbage spilled out as well." Contains sections on "Looking the Other Way," "Cloaks of Fuzz," and "Believers," and suggests that people check out the history of a reputed phenomenon before giving any credence to it.

Monteleone, Thomas F. "Last Word: The Gullibility Factor." *Omni,* May 1979, p. 146. Fascinating report by author on a UFO-contactee hoax he himself promulgated in 1967 only to have credulous "investigators" swallow his story whole.

Morris, Scot. "New Scandal in Psychic Research." *Omni,* April 1979, p. 27. Downfall of the Soal-Goldney experiment.

"Psi-Fi." *Scientific American,* April 1979, pp. 85-86. Recent setbacks in parapsychology.

Richman, William, "They Came from Inner Space." *Mother Jones,* December 1978. Report on research by Alvin Lawson and W. C. McCall using hypnotism to explore minds of UFO-contactee claimants. "[Lawson] sees these tales as something rising up out of the depths of the human mind."

"Some People Believe Anything They See on TV." *U.S. News & World Report,* May 21, 1979, pp. 52-54. Interview with Prof. Paul Kurtz on television's role in engendering public credulity and causing confusion over fact vs. fiction about both historical events and the paranormal. "Critical judgment is being perverted and polluted. Watching the tube is replacing analysis. Imagery is replacing language and symbols. That is dangerous to a society because it means people can't tell what the truth is."

Bibliographies

Fraknoi, Andrew. *Update: Debunking Pseudoscience.* 1979, 3 pp. An annotated bibliography covering scientific views of UFOs, ancient astronauts, the Bermuda Triangle, Uri Geller, and other areas of fringe science. Available from the Astronomical Society of the Pacific, 1290 24th Ave., San Francisco, Calif. 94122, for 35 cents.

Leith, Harry. *Bibliography of Books and Articles on the Relationship Between Science and Pseudoscience.* 2nd ed., 1978, 61 pp. York University, Department of Natural Sciences, Downsview, Ontario, $3.45.

Wilcox, Laird M. *Astrology, Mysticism and the Occult: A Critical Bibliography.* 9 pp. Available from the author at P.O. Box 1832, Kansas City, MO 64141, for $1.00.

—*K.F.*

SUBSCRIPTION ORDER FORM

$15.00 for 1 year $27.00 for 2 years $35.00 for 3 years

☐ Start a new subscription in my name
☐ Renew or extend my subscription

Your name _____

Street _____

City _____ State _____ Zip _____

Please enter the following Gift Subscriptions:

To _____
Street _____
City _____ State _____ Zip _____

Gift card to read:
"From _____"

To _____
Street _____
City _____ State _____ Zip _____

Gift card to read:
"From _____"

I enclose $_____ to cover _____ subscriptions

the Skeptical Inquirer THE ZETETIC 1203 Kensington Avenue • Buffalo, New York • 14215

Basic Annotated Bibliography

This is the second section of a three-part basic annotated bibliography of books critical of occult beliefs. The first section appeared in our Summer 1979 issue. It is a selected list and so necessarily leaves out some books that might have been included. Covering a span of years from the mid-nineteenth century to the mid-1970s, the bibliography was prepared for the SKEPTICAL INQUIRER by Robert R. Lockard of the University of Oregon Library, with the assistance of Ray Hyman, professor of psychology at the University of Oregon. The concluding part of this list will appear in a forthcoming issue.

Hall, Trevor H. *New Light on Old Ghosts.* London: Duckworth, 1965; Hollywood-by-the Sea, Fla.: Transatlantic, 1965. With a sharp eye for trickery and fraud, Hall investigates some of the famous mysteries of the past, such as the Borley Rectory hauntings and the D. D. Home levitations. His standards for the rules of evidence are very strict; applied to these mysteries, none passes the tests.

_____ *The Spiritualists: The Story of Florence Cook and William Crookes.* London: Duckworth, 1962; New York: Garrett/Helix, 1963.

Hansel, C. E. M. *ESP: A Scientific Evaluation.* New York: Scribner's, 1966. The major scientific evaluation of the claims of psychic research. Principally, a methodological critique of the most famous experiments, all of which Hansel finds wanting from a strict scientific point of view. There is also much historical material here, but its main value is methodological.

Harris, Sara. *Father Divine: Holy Husband.* Garden City, N.Y.: Doubleday, 1953. A revealing look at one of the more flamboyant gurus of the thirties and forties, a Harlem preacher who claimed to be God incarnate and consequently managed to build a financial empire worth millions. The author examines the movement from within by scrutinizing the lives and motives of Father Divine's followers and succeeds in proving that some of the people can be fooled all the time.

Heenan, Edward F. (ed.). *Mystery, Magic and Miracle: Religion in a Post-Aquarian Age.* Englewood Cliffs, N.J.: Prentice-Hall, 1973. A collection of papers that focus on the mysterious, magical, and miraculous aspects of the current religious revival in the youth culture.

Hering, Daniel W. *Foibles and Fallacies of Science: An Account of Celebrated Scientific Vagaries.* New York: Van Nostrand, 1924. An early survey of the major pseudosciences: astrology, alchemy, perpetual motion, etc. The point of view is scientific and critical but the account is largely descriptive.

Holbrook, Stewart H. *The Golden Age of Quackery*. New York: Macmillan, 1959. An amusing trip through American history following the development of patent medicines and general quackery.

Holmyard, Eric John. *Alchemy*. Baltimore: Penguin, 1957. A straightforward history.

Houdini, Harry. *A Magician Among the Spirits*. New York: Harper, 1924. The great magician wanted to believe in spiritualism, yet after having studied it for many years came to the conclusion that it could not be proved. In the course of studying it, he uncovered many of the techniques by which mediums manage to deceive sitters. These are described with clarity and wit.

Jackson, Herbert G., Jr. *The Spirit Rappers*. Garden City, N.Y.: Doubleday, 1972. The strange story of Kate and Maggie Fox, who claimed they could talk with the dead. They were internationally famous before they died. Many writers trace the spiritualism movement in America back to them. Based on letters, memoirs, court records, newspaper accounts, and journals.

Jacobs, David Michael. *The UFO Controversy in America*. Bloomington: Indiana University Press, 1975. Bibliography. Although written by a believer in UFOs and criticized for certain shortcomings (see especially the "Review Symposium," *The Zetetic* [Fall/Winter 1976]:69-73), it is the first serious attempt by a historian to chronicle the entire UFO controversy from 1947 to 1974.

Jahn, Melvin E., and Woolf, Daniel J. (eds.). *The Lying Stones of Dr. Johann Bartholomew Adam Beringer, Being His Lithographiae Wirceburgensis*. Berkeley: University of California Press, 1963. The original text of one of the most famous hoaxes in the history of science. The traditional interpretation of this is illustrated by a quote from a bookseller's catalog: "A famous hoax in the history of science. Beringer's students manufactured curious 'petrified fossils' and planted them in the neighborhood of Wurzberg, where the professor was lead to discover them. He published the present book about them before he discovered the fraud." However, the present edition includes, in an appendix, various documents that demonstrate that the hoax was perpetrated by two of Beringer's colleagues.

Jameson, Eric. *Natural History of Quackery*. Springfield, Ill.: C. C. Thomas, 1961; London: M. Joseph, 1961.

Jastrow, Joseph. *The Betrayal of Intelligence: A Preface to Debunking*. New York: Greenberg, 1938. A good account of the assault on intelligence made by the purveyors of pseudoscience. Good chapter on pseudopsychology. However, the description of each claim is very brief. As Jastrow describes attempts to exploit the gullible, his book reads as if it were written today.

_____. *Wish and Wisdom: Episodes in the Vagaries of Belief*. New York: Appleton, 1935. Jastrow identifies seven types of distortions of rationality that "form deviations from the path of wisdom by yielding to wish." Each is illustrated by real cases. For example, the case of Blondlot's N-rays is one used to illustrate rationalization, the assigning of good reasons for weak thinking. Because of the number of cases, it is a sort of forerunner of Gardner's *Fads and Fallacies*.

Jordon, Davis S. *The Higher Foolishness*. Indianapolis: Bobbs-Merrill, 1927. A facetious account of what the author calls Sciosophy, the school of thought opposed to science and reason. With a good deal of irony he describes its basic beliefs.

Kaufman, Robert. *Inside Scientology*. New York: Olympia, 1972. The author, a musician, turned to Scientology to solve his personal problems. The book is an exposé of Scientology as a therapeutic system but not a complete attack on all aspects of the movement.

Keene, M. Lamar (as told to Allen Spraggett). *The Psychic Mafia*. New York: St. Martin's, 1976. From an ad: "Keene explains how he bamboozled the gullible...not intended as an attack on all psychic phenomena."

Klass, Philip J. *UFOs Explained*. New York: Random House, 1975. One of the few books critical of the UFO phenomenon. The book is composed of cases, one to a chapter, selected to illustrate different kinds of sightings. For each case there is a "UFOlogical Principle" that sums up the lesson to be learned and which is to be applied whenever the reader reads of a new sighting.

Klein, Alexander (ed.) *The Double Dealers: Adventures in Grand Deception*. New York: Lippincott, 1958. A collection of true stories of deceptions, hoaxes, ruses, and impostures. While these are not deceptions in the area of the occult, they do serve to demonstrate both the prevalence and technique of deception.

_____ (comp.). *Grand Deception: The World's Most Spectacular and Successful Hoaxes, Impostures, Ruses and Frauds*. New York: Lippincott, 1955. A diverse anthology of lesser-known frauds, running the gamut from pathos to humor. Basic criterion of selection is entertainment. Varied locales, spheres of action, and periods of time are represented, with arrangement based on motivation, the immediate goal of deception, and the field in which it operated.

Kline Milton V. (ed.). *A Scientific Report on "The Search for Bridey Murphy."* New York: Julian, 1956. "It is the purpose of this book to deal with the psychological problems which are presented and directly involved in *The Search for Bridey Murphy* and to elaborate and to clarify the nature of the story which unfolds, as well as to present a comprehensive and accurate account of scientific hypnosis for the general public and the interested scientist." (Editor's Foreword) Excellent examination of the methodological and logical shortcomings of Morey Bernstein's book.

Kusche, Lawrence David. *The Bermuda Triangle Mystery Solved*. New York: Harper, 1975. A classic example of a debunking book. Through careful and exhaustive research, Kusche establishes a natural explanation of the various disappearances in the area. It would have to appear on any list of the best books that shed light on the claims of the irrational.

Lamont, Corliss. *The Illusion of Immortality*. New York: Putnam, 1935; 4th ed., New York: Ungar, 1965. Because of the claims of out-of-body experiences and spiritualism, the implications for immortality are obvious. Since this book considers critically and negatively all the arguments for immortality, it is relevant to the concerns of this bibliography. Among the arguments is the putative evidence from spiritualism.

Leoni, Edgar. *Nostradamus: Life and Literature*. New York: Exposition Press, 1961. The best edition currently available. The reason for its inclusion is the critical apparatus. Each quatrain or paragraph of Nostradamus' prophecies is accompanied by a commentary that attempts to clarify the meaning and that often points out its asininity. Of special interest is the critical bibliographical essay on works of commentators and critics.

Lewinsohn, Richard. *Science, Prophecy, and Prediction: Man's Efforts to Foretell the Future, from Babylon to Wall Street*. A. J. Pomelons (trans.). New York:

Harper, 1961. Summaries and appraisals of the art of prediction done with an attitude of practical disbelief.

Lofland, John. *Doomsday Cult: A Study of Conversion, Proselytization, and Maintenance of Faith.* Englewood Cliffs, N.J.: Prentice-Hall, 1966. An early sociological study of the Reverend Moon and his cult that concluded with an accurate prediction: "As of June 1964, then, the [cult] was still quite small, but was experiencing healthy growth. The disciples' propensity to keep moving is likely to cause continual growth. It will not be long before they effectively blanket the country with a thin, but active, layer of proselytizing true believers." (p. 268)

McComes, Henry Clay. *Ghosts I Have Talked With.* Baltimore: Williams, 1935. Based on the author's investigations for the American Society for Psychical Research. Almost all the cases are expositions of fraudulent mediums.

MacDougall, Curtis D. *Hoaxes.* 2nd ed. New York: Dover, 1958. A compendium of accounts detailing hundreds of frauds over the past several centuries in which assorted forgers, swindlers, imposters, and con men have thrived on human gullibility. Thoroughly researched and entertainingly written. It covers hoaxes in the fields of art, science, literature, history, journalism, and politics.

Mackay, Charles. *Memoirs of Extraordinary Popular Delusions and the Madness of Crowds.* London: Bentley, 1841. A classic on the subject of crowd psychology, covering the most widespread scams of modern history, with a European emphasis. Contents include such subjects as alchemy, business fraud, prophecies, the Crusades, the witch mania, dueling, relics, and famous haunted houses.

Macy, Christopher (ed.). *Science, Reason, and Religion.* Buffalo: Prometheus Books, 1974. From the 1976 Prometheus catalog: "This book examines the recent growth of religious cults and the rejection of science and reason. Among the contributors are: Christopher Evans, an experimental psychologist, who deals critically with Scientology and dianetics; Colin Campbell, of the University of York, who recommends a rational approach to secularization; D. J. Stewart, of Brunel University, who analyzes rationalism and the justification of belief; and Ernest Hutten, of the University of London, who discusses the future of science."

Mair, Lucy. *Witchcraft.* New York: McGraw-Hill, 1969. A good general account, in the authoritative World University Library series. Primarily concerned with the ideas and practices of people who take the existence of witchcraft for granted today. Emphasis is on anthropological studies.

Mannix, Daniel P. *Step Right Up!* New York: Harper, 1951. Mannix describes his own experiences traveling with the carnival and mastering mind-reading, fire-eating, sword-swallowing, and the like. Written in a semi-fictional style and filled with anecdotes, it nevertheless describes how these corny acts are done.

Mathison, Richard R. *Faiths, Cults and Sects of America: From Atheism to Zen.* New York: Bobbs-Merrill, 1960. Short, humorously written chapters on the standard cults; included are several that demonstrate the charlatanry of some cult leaders and the gullibility of their followers.

Menzel, Donald H. *Flying Saucers.* Cambridge, Mass.: Harvard University Press, 1953. The earliest debunking book on UFOs. The author was a professor of astrophysics at Harvard. The last chapter, "What to Do if You See a Flying Saucer," gives a checklist of tests to apply to any sighting. The book is especially good for its presentation of natural explanations of UFO reports.

Meyer, Donald. *The Positive Thinkers: A Study of the American Quest for Health, Wealth, and Personal Power from Mary Baker Eddy to Norman Vincent Peale.* New York: Doubleday, 1969. A thorough, scholarly, and fair study of some lightweight popular psychologies. Their inconsistencies and gaps in logic are pointed out.

Miller, Ronald. *The Piltdown Man.* New York: St. Martin's, 1972. A good retelling of one of the all-time great hoaxes, Piltdown man, which endured for forty years.

Moger, Art. *Pros and Cons: Incredible True Tales About Famous Con Men, Frauds, Hoaxes, and Beguiling Swindlers.* New York: Fawcett, 1975. Mostly reprints of articles about ten "pro" con men, some recent, some older.

Montagu, Ashley, and Darling, Edward. *The Prevalence of Nonsense.* New York: Harper, 1967. A large collection of short, critical comments on scores of common beliefs the authors consider nonsense. In the personal-essay genre; not every reader will agree with the authors.

Münsterberg, H. *Psychology and Social Sanity.* New York: Doubleday, 1914. An early attempt to apply what the psychologist knows to "social difficulties." Of relevance to this bibliography is the chapter on thought transference, which offers several explanations of how mind-reading is done, and the chapter on "the intellectual underworld" by which the author means the propensity of some educated people to fall prey to superstition and humbug.

Murchison, Carl A. (ed.). *The Case For and Against Psychical Belief.* Worcester, Mass.: Clark University, 1927. Papers presented at a public symposium at Clark University in 1926. Of interest here are the two papers in Part III, "Unconvinced As Yet," by John E. Coover and Gardner Murphy, and the two papers in Part IV, "Antagonistic to the Claims That Such Phenomena Occur," by Joseph Jastrow and Harry Houdini.

Napier, John. *Bigfoot.* New York: Dutton, 1972. Consideration of the existence of the Pacific Northwest sasquatch and the Himalayan yeti by a primate biologist. After the most thorough and informed examination of both hard and soft evidence to date, Napier concludes that we have no scientific proof of its physical existence but that it has considerable mythic value for contemporary humanity.

Needleman, Jacob. *The New Religions.* New York: Doubleday, 1970. A sympathetic, yet somewhat skeptical, survey of religions that have been imported, often with leaders, from the East. Much attention is paid to their organization, and there are interviews with leaders and followers.

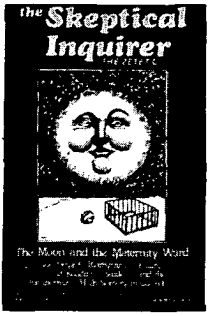
Nolen, William A. *Healing: A Doctor in Search of a Miracle.* New York: Random House, 1975. Dr. Nolen spent two years searching for healing that was, in fact, miraculous. He found none. He studied some of the most famous healers: Kathryn Kuhlman, Norber Chen, and the Filipino psychic surgeons. He describes their methods and why, to the trained eye, no miraculous healing took place. One of the top debunking books.

Pennsylvania, University of. Seybert Commission. *Preliminary Report of the Commission Appointed by the University of Pennsylvania to Investigate Modern Spiritualism in Accordance with the Request of the Late Henry Seybert.* Philadelphia: Lippincott, 1920. The report itself, dated May 1887, presented a negative conclusion. An extensive appendix contains the documents examined, together with the texts of interviews.

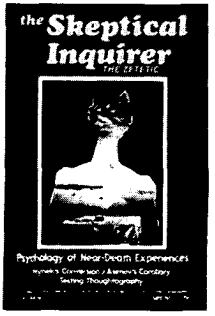
—Robert R. Lockard

Catch Up On What You've Missed In The SKEPTICAL INQUIRER Order These Back Issues NOW

Partial Contents of Past Issues

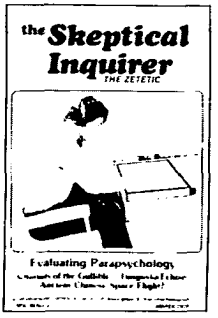


SUMMER 1979 (vol. 3, no. 4): The moon's effect on the birthrate *by George O. Abell and Bennett Greenspan*, A critical review of biorhythm theory *by Terence M. Hines*, "Cold reading" revisited *by James Randi*, Teacher, student, and reports of the paranormal *by Elmer Kral*, Encounter with a sorcerer *by John Sack* ($5.00)

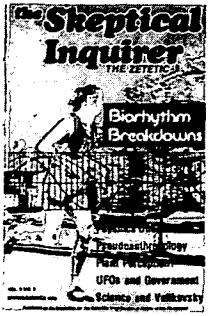


SPRING 1979 (vol. 3, no. 3): Psychology and near-death experiences *by James E. Alcock*, Television tests of Masuaki Kiyota *by Christopher Scott and Michael Hutchinson*, The conversion of J. Allen Hynek *by Philip J. Klass*, Asimov's Corollary *by Isaac Asimov* ($5.00)

WINTER 1978 (vol. 3, no. 2): Is parapsychology a science? *by Paul Kurtz*, Chariots of the gullible *by W. S. Bainbridge*, The Tunguska event *by James Oberg*, Space travel in Bronze Age China *by David N. Keightley* ($5.00)



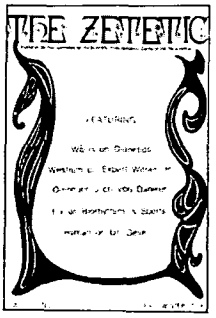
FALL 1978 (vol. 3, no. 1): An empirical test of astrology *by R. W. Bastedo*, Astronauts and UFOs *by James Oberg*, Sleight of tongue *by Ronald A. Schwartz*, The Sirius "mystery" *by Ian Ridpath* ($5.00)



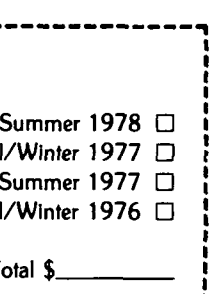
SPRING/SUMMER 1978 (vol. 2, no. 2): Tests of three psychics *by James Randi*, Biorhythms *by W. S. Bainbridge*, Plant perception *by John M. Kmetz*, Anthropology beyond the fringe *by John Cole*, NASA and UFOs *by Philip J. Klass*, A second Einstein ESP letter *by Martin Gardner* ($7.50)

FALL/WINTER 1977 (vol. 2, no. 1): Von Däniken *by Ronald D. Story*, The Bermuda Triangle *by Larry Kusche*, Pseudoscience at Science Digest *by James E. Oberg and Robert Sheaffer*, Einstein and ESP *by Martin Gardner*, N-Rays and UFOs *by Philip J. Klass*, Secrets of the psychics *by Dennis Rawlins* ($7.50)

SPRING/SUMMER 1977 (vol. 1, no. 2): Uri Geller *by David Marks and Richard Kammann*, Cold reading *by Ray Hyman*, Transcendental Meditation *by Eric Woodrum*, A statistical test of astrology *by John D. McGervey*, Cattle mutilations *by James R. Stewart* ($7.50)



FALL/WINTER 1976 (vol. 1, no. 1): Dianetics by *Roy Wallis*, Psychics and clairvoyance *by Gary Alan Fine*, "Objections to Astrology" *by Ron Westrum*, Astronomers and astrophysicists as critics of astrology *by Paul Kurtz and Lee Nisbet*, Biorhythms and sports performance *by A. James Fix*, Von Däniken's chariots *by John T. Omohundro* ($7.50)



Please send me the following issues:

$5.00 each		$7.50 each	
	Summer 1979 ☐		Spring/Summer 1978 ☐
	Spring 1979 ☐		Fall/Winter 1977 ☐
	Winter 1978 ☐		Spring/Summer 1977 ☐
	Fall 1978 ☐		Fall/Winter 1976 ☐

Name _____ (print clearly)

Total $_____

Street _____

Bill me ☐

City _____

Check enclosed ☐

State _____ Zip _____

The Skeptical Inquirer • 1203 Kensington Avenue • Buffalo, N.Y. 14215

From Our Readers

The letters column is a forum for views on matters raised in previous issues. Letters are welcome. Some may have to be condensed.

Cry of support for Wheeler

When I read in the *Scientific American* for April 1979 that Dr. Wheeler had confronted the parapsychologists, I was astonished and delighted enough to dash off a letter to the man himself. Now that I have read the partial text of his remarks (Spring 1979), I am moved to a public cry of support. If I have a single qualification to offer, it is that in my opinion the problem may be bigger than Dr. Wheeler thinks.

Let us grant for the moment that there may be such a thing as a reputable parapsychologist. I think we will find that he starts out with an arbitrary assumption, carries out his investigations informally (so as not to disturb a uniquely sensitive subject), and reinterprets his findings as best they fit his initial assumption. When those doors have been opened, it is not surprising that wondrous capacities may be found, not only in "uniquely sensitive subjects," but also in somewhat less sensitive begonias and even hunks of basalt, and that instant responses may be had from the farthest reaches of the universe.

Those of us cursed with a good memory and sufficient years may recall that one of the principal tools of classical psychology was "introspection." Introspection was, of course, simply another way of looking at the word *testimonial*, and with that we are back with religious experience and the Middle Ages where we belong.

From such evidence as the above, I argue that we are not dealing with simple cranks but with the whole kit and kaboodle of our humanities culture. With its background of dialectics, testimonial, and metaphysics, the humanities mind has always seen rational thought as the enemy. And it is with this orientation that the humanities intellectuals ran *ker-bam* into relativity and quantum mechanics—and they found they didn't understand a word of either. And *that* they found unforgivable.

So now the people who run our world—the business and political communities, the media, and most of academia—have joined the church in urging us back to the good old days of street slops and plague and other miracles abounding.

Such people have no more place in the scientific community than has a horseman in the Indianapolis 500. I bow to no one in my respect for horses, but it would be curious to contemplate such an entrant demanding that he be allowed to enter the race according to his own rules and, perhaps, demanding that in the spirit of fair play and true objectivity the automobiles run on hay.

Therefore I would say: Either keep the horses off the track or turn it over to the horses.

Wailes Gray
Nyack, N.Y.

Demand end to bogus claims

I just finished reading my second issue of the SKEPTICAL INQUIRER from cover to cover. It is an excellent magazine and a refreshment after all the garbage that seems to ooze out of all types of media these days. It seems that bad science (like bad politics) makes good press.

I would like to comment on J. A. Wheeler's remarks (Spring 1979, pp. 12-13). I disagree with his desire to withdraw from the symposium and I'm glad that, instead, he took the opportunity to speak out. I agree that unfounded scientific claims have no place in AAAS, and as a member of AAAS I would like to join Mr. Wheeler in asking for the removal of parapsychology from the association.

Why is it that since our tax dollars also go for pseudo research Sen. Proxmire gives his "Golden Fleece" to someone doing legitimate research? I feel that it is time for everyone in the scientific community to stand up and demand an end to bogus claims based on contrived results of loosely conducted experiments.

I got a chuckle out of Arthur C. Clarke's note on Martian technology (Winter 1978, p. 79) and would like to point out to him that the evidence he cites also proves beyond any doubt the existence of Atlantis and the previous contact between Atlantean and Martian civilizations. After all, camouflaging a few canals would be a snap for a society with the technology to hide an entire continent for over two millennia.

I would like to thank everyone associated with CSICP for doing such a good job in presenting the other side of the paranormal. Please keep up the good work on the SKEPTICAL INQUIRER.

William George Sewell
Niles, Ill.

Lunar non-effect

As a postscript to George Abell's excellent review of *The Lunar Effect* (Spring 1979), let me direct your attention to the May 1979 issue of the *American Journal of Epidemiology*, where David Lester (Stockton State College, N.J.) writes on "Temporal Variations in Suicide and Homicide." Dr. Lester has analyzed *all* the suicides and homicides in the United States during 1973 (the first year for which daily data were available). While he found some monthly variation, as well as variation due to holidays (more homicide deaths on Saturdays, Sundays, and holidays such as New Year's, Christmas, July 4, etc.), he found no correlation with the lunar cycle.

Homicides at full moon and new moon were compared with the average values found one week later and earlier. For homicides at the new moon there was an average of 60.7 seen vs. 60.0, while at full moon the figures were 57.3 seen vs. 56.3. These deviations were within the limits one might expect from chance fluctuations.

Milton A. Rothman
Philadelphia, Pa.

Eyewitness accounts unreliable

Being a recent subscriber to the SKEPTICAL INQUIRER, I must congratulate Robert Sheaffer on his excellent review of *The Hynek UFO Report* (Winter 1978). Being a devout skeptic myself, both personally and professionally, I do not believe that there is now, nor has there ever been, any "serious UFO research." That which Hynek claims to be research is nothing more than a pretended realization of an eccentric idea, one based totally on a preconceived notion. Nowhere in Hynek's book is there a single valid conclusion that even approaches making sense.

Second, it strikes me that the lack of tangible physical evidence amenable to analysis, experimentation, or even basic educated observation should indicate to Hynek that there is definitely something wrong. After all, if a phenomenon like UFOs or "flying saucers" has been actually occurring with such

reported regularity for over thirty years—close encounters of the second and third kind—there has to be some tangible physical evidence as stated earlier. But there is *none*. (At least no one has been able to present any to Philip J. Klass and collect their $10,000 reward.)

Third, almost all UFO reports, except for the so-called radar UFOs, are based mostly entirely upon eyewitness accounts and absolutely nothing more. Perhaps Hynek feels that this is the best criterion on which to judge a phenomenon; however, I am not quite as impressed with eyewitnesses. Being a private investigator, I deal daily with facts, information, and evidence. It is my experience that eyewitness accounts describing either an object or an event are almost always unreliable. A person's perception is affected by numerous factors, and the result is usually a complete distortion. This is especially true in the case of the uneducated or credulous.

And last, Hynek's book seems to be little more than a good example of sour grapes. He is angry that the Air Force in its Blue Book did not come to the same nonsensical conclusions that he did.

In conclusion, Hynek will continue traveling throughout the country giving his lectures on UFOs (and, by the way, collecting his fees) because people are willing to believe almost anything, despite the lack of evidence. It seems today that anyone with a typewriter can simply write a book about ghosts, ghouls, elves, and their central headquarters in the Bermuda Triangle and sell it without much difficulty. You cannot expect reason from the sensationalist, because to him (or her) reason simply does not count.

George Kalishevich
Coaldale, Pa.

Tests vs. phenomena tested

It was encouraging to read so measured and thoughtful a piece as Professor Kurtz's "Is Parapsychology a Science?" (Winter 1978); yet this only makes it the sadder that, like so many before him, he should fall into the trap of equating laboratory experiment with parapsychology per se.

ESP is *not* "only a theory used to explain above-chance runs encountered in the laboratory," as he suggests. Rather, it is a theory proposed to account for a number of spontaneous occurrences, widely reported, for which no alternative explanation is as yet forthcoming, and which the laboratory experiments are an attempt to replicate under controlled conditions. To confuse the experiments designed to test the phenomenon with the phenomenon itself is clearly a logical fallacy: Consequently it is equally fallacious to argue that if the experiments fail to support the theory, the theory lacks all support. This is, after all, equivalent to arguing that if all of a certain animal species die in zoo conditions, then travelers' reports that the species has been observed surviving in the wild must be invalid.

Professor Kurtz has, sadly, made the same naive mistake as so many of his predecessors, and this detracts from the otherwise high level of his contribution.

Hilary Evans
London, England

Paul Kurtz replies:

Mr. Evans has raised an interesting point often appealed to by parapsychologists. It assumes that the "spontaneous occurrences" are reported accurately and that ESP is responsible for them. Surely we need to be sensitive to new data that may be uncovered. But it is precisely because the alleged reports of spontaneous occurrences are often confused and unreliable that researchers have attempted to replicate them in the laboratory—thus far without success. To "confuse the existence of the experiments designed to test the phenomenon with the phenomenon itself" would

indeed be a mistake, but to assume that the phenomenon exists or that it is being caused by ESP is to beg the question.

Mr. Evans's analogy with animals who die in the zoo is questionable. Bigfoot, the Loch Ness monster, and vampires have never been observed under zoo conditions. On the other hand, are the reports of their being observed in the field reliable? Should they be accepted on the basis of hearsay? We need stringent criteria both for laboratory tests and for describing and explaining alleged phenomena in ordinary life: In the case of ESP, we have them for neither.

The Hynek profile

I found the article "The Conversion of J. Allen Hynek" (Spring 1979), by Philip J. Klass, most disappointing. One would hope that the SKEPTICAL INQUIRER would encourage searching examinations of the claims of UFO proponents like Dr. Hynek. Instead, it has published a superficial and biased piece of inquiry into his thoughts and opinions. My objection to the article is not so much that it is unpleasant to Dr. Hynek, but rather that it does not add anything of value to our knowledge.

That Dr. Hynek has changed from a skeptic to a proponent of UFO research is common knowledge. What, then, can Mr. Klass's article offer us? Basically, only two things: information as to the timing of this shift and an explanation of its motives. It fails on both counts.

First, the matter of timing. Mr. Klass feels the shift took place "in the early 1970s." To prove this, he plays fast and loose with evidence and consistently confuses the question of support for UFO research with belief in the extraterrestial hypothesis of UFO origins. It is this confusion that allows him to describe Dr. Hynek's book *The UFO Experience* as "fence-straddling." In the article, he quotes Dr. Hynek as saying that his "transformation was complete by the late 1960s." Dr. Hynek told me essentially the same thing in an interview on April 27, 1973. At that time, he mentioned three influences that led him to take a wholly different approach. The first was the influence of Jacques Vallee and others with whom he met on an almost weekly basis during the period 1964-1966. The second was the public outcry following the "swamp gas" fiasco in 1966, in which Hynek felt the position he was publicly presented as taking did not represent his own feelings. The third influence was the persistent and angry criticism by the late Dr. James McDonald. None of these factors is mentioned by Mr. Klass, who appears to believe that Dr. Hynek was envious of McDonald's popularity with UFO buffs. It seems much more reasonable to believe that Dr. Hynek was concerned instead with his own reputation among his scientific colleagues.

So here we have two questions: (1) Are we talking about Hynek's attitude toward UFO research or about his belief in the ETH? and (2) Did the shift in his opinions vis à vis the first take place in the late 1960s or the early 1970s?

Second, we have the question of motives. What does Mr. Klass see as the motive for Dr. Hynek's change of opinion? The use of the word *conversion* suggests an external agent: What agent does Mr. Klass see as responsible? He seems to suggest that it was the approval of the sensationalist tabloids that Dr. Hynek sought. Can he really believe this? Is it not possible that Dr. Hynek altered his stance because he was persuaded that, in fact, there might be a very important residuum to UFO reports? And is it not perfectly honest, in fact logical, to change one's mind when one gets new evidence that tends to make one doubt one's original opinion?

To explain why someone changes his mind is not a simple matter. How are we to explain Mr. Klass's change of emphasis from his *UFOs Identified* to his *UFOs Explained*? Is an external agent responsible, or is it the case that

more investigation led to a different opinion? Could this not have happened with Dr. Hynek as well?

Inquiring into the motives of one's opponents is a difficult enough problem from an intellectual standpoint, but not to do it in a thorough and fair-minded way seems especially questionable.

Ron Westrum
Associate Professor of Sociology
Eastern Michigan University
Ypsilanti, Mich.

Philip J. Klass replies:

Westrum is correct that it is "logical to change one's mind when one gets new evidence that tends to make one doubt one's original opinion." I would go further: it is commendable. But in Hynek's case, as he himself states, it was **not new evidence but simply a reexamination of old evidence using a far less critical attitude than he had used for nearly two decades. In Hynek's book** The Edge of Reality, ***co-authored with Jacques Vallee, Hynek states on page 202: "In the fall of '66 was the real*** *time I changed. I said 'I'm going back and relook at this material with a different viewpoint, no longer assuming that the chances are strong that it's all a lot of junk.' " For nearly 20 years the USAF had paid Hynek to function as a scientific investigator. If he had been simply dismissing the best UFO cases on the basis of assumption, rather than scientific investigation, then he had been in default on his responsibility.*

On page 204 of the same book, Hynek describes how he was chastised by the late Dr. James E. McDonald in late 1966, who said: "Allen, how could you have sat on this data for 18 years and not let us know about it?" To this, Hynek says he replied: "Well, damn it, what data? Large parts of the data are sheer nonsense." Then, according to Hynek's account he added: "But Jim, you weren't there. You don't understand. When you have these senior scientists like Robertson, a Nobel Prize winner, Luis Alvarez, another Nobel Prize winner [members of a panel of top scientists convened by the CIA in early 1953 to study the most impressive UFO cases], all saying it's nonsense, you don't get an assistant or associate professor [i.e., Hynek] going up and pounding on generals' doors and saying, 'Look, listen to me.' ... You're a voice crying in the wilderness."

The latter suggests that Hynek's conversion actually occurred in the early 1950s but that he simply lacked the courage to speak out and was content to act, and talk, like a UFO-skeptic for more than another decade. I leave it to Westrum, and others, to decide which of Hynek's statements is correct.

Westrum suggests that a second motivating factor in Hynek's metamorphosis in the mid/late 1960s "was the public outcry following the 'swamp gas' fiasco in 1966, in which Hynek felt the position he was publicly presented as taking did not represent his own feelings." But when Hynek himself discusses that incident in the aforementioned book (p. 201), he says: "Oddly enough, I really think those small lights may very well have been swamp gas!" *(Emphasis in original.)*

I agree with Westrum that it is difficult, if not impossible, to determine the motives for another person's actions, let alone our own. For this reason, I made no attempt in my article to assess Hynek's motives but simply presented the factual chronology of events so each reader could reach his own conclusions. Clearly, Westrum did not revise his own earlier assessment and that is his privilege.

Measure of reason

I have been a satisfied subscriber to the SKEPTICAL INQUIRER from its inception, and I do appreciate your attempts to restore a measure of reason to an increasingly escapist world. Being assaulted each day by claims of extraor-

dinary powers and incredible occurrences, we laymen have few places to turn to for honest analyses.

John Barret III
Knoxville, Tenn.

Breach of Ethics

J. Richard Greenwell has entirely missed the point in his letter in the Spring issue, which was in response to the comments about companies who publish pseudoscience books. Greenwell's letter was in answer to earlier statements by Ernest Taves.

Of course publishing is a business, and its aim is to make money. However, there are ethical and unethical ways of making money. When a publisher takes a bunch of undocumented and highly unlikely hokum, by a writer who is unable to think logically and who can't check his "facts," and publishes it as *non-fiction*, then a breach of ethics has occurred. If the advertising by the publisher stresses that the contents of the book is factual, then a further unethical event has occurred.

I would have no objection whatsoever if all the books on the occult and about ghosts, time travel, etc., were clearly marked "Fiction" and displayed in the science-fiction section. The publishers would still make money, but the public would be protected.

Gordon Stein
Libertyville, Ill.

Correction

A dropped line in the final paragraph of James Alcock's article "Psychology and Near-Death Experiences" (Spring 1979) scrambled the meaning somewhat. The passage in question should have read: "... As a result there was no one around who could cure hysteria. We shouldn't repeat the same mistake. We shouldn't overlook the phenomenon just because we reject the explanation."

Editor's Afterword

One of the pleasures of editing a small, special-interest periodical like the SKEPTICAL INQUIRER is the close relationship one feels with the readers. I think of readers as colleagues, as part of a network of persons of varying views loosely united by a set of common interests. I appreciate all correspondence. Although I cannot acknowledge all of it, I do read everything with interest and frequently pass on letters and ideas to others who I know would be interested. Many of you send information and clippings. Others request critiques and analyses of particular subjects and claims. A number of news stories and several articles in recent issues have been stimulated by such communications. And some have had your own manuscripts published.

Some of you send notes of support, especially welcome in an activity where one's detractors tend to be quick to the typewriter or pen. Others share constructive criticism, some of it quite thoughtful and detailed. That, too, is welcome and needed and, I assure you, considered—I hope with the same degree of thoughtfulness that went into it.

From others, usually those who don't bother to share their views directly with us, or with the scientific community generally, there is outright opposition to efforts to evaluate skeptically the claims of borderline science. This is, of course, an attitude far from the spirit of science. It is a special pleading of a high order. Unwillingness to subject one's best evidence to the critical judgment of informed specialists is one of the revealing marks of a pseudoscientist.

My goals in editing the SKEPTICAL INQUIRER (which is now concluding its third year) and working as a member of the CSICP are really quite modest. I hope to address the middle group of the public that likes to make its judgments about issues—in this case the claims of paranormal events—on the basis of the best available facts and information. And I hope we play a role in discovering those facts and in presenting them in a clear and straightforward way. We encourage scientists, scholars, and laymen everywhere to engage in critical analysis of paranormal claims, using whatever special abilities and information they may possess. And we attempt to provide a forum for informed discussion of all the issues raised. Throughout, we hope our emphasis on facts, scientific evaluations, and informed analysis provides balance to highly visible but distorted, sensationalized, and one-sided accounts that too often supply the only information the public has on supposed "paranormal" happenings.

Skepticism is not, despite much popular misconception, a point of view. It is, instead, an essential component of intellectual inquiry, a method of determining the facts whatever they may be and wherever they may lead. It is a part of what we call common sense. It is a part of the way science works. All who are interested in the search for knowledge and the advancement of understanding, imperfect as those enterprises may be, should, it seems to me, support critical inquiry, whatever the subject and whatever the outcome.

We welcome your continued participation in that effort.

—Kendrick Frazier

Scientific Consultants

These scientists and scholars are consultants to the CSICP.

Richard E. Berendzen, professor of astronomy, provost, American University
John R. Cole, research associate in anthropology, University of Massachusetts
J. Dath, professor of engineering, Ecole Royale Militaire, Brussels, Belgium
Sid Deutsch, professor of bioengineering, Rutgers Medical School
J. Dommanget, astronomer, Royale Observatory, Brussels, Belgium
Naham J. Duker, assistant professor of pathology, Temple University
Frederick A. Friedel, philosopher, Hamburg, West Germany
Robert E. Funk, anthropologist, New York State Museum & Science Service
Laurie Godfrey, anthropologist, University of Massachusetts
Donald Goldsmith, astronomer; president, Interstellar Media
Henry Gordon, magician, Montreal
Stephen Jay Gould, professor, Harvard University
Norman Guttman, professor of psychology, Duke University
Edwin C. Krupp, astronomer; director, Griffith Observatory
Richard H. Lange, M.D., chief of nuclear medicine, Ellis Hospital, Schenectady, New York
Gerald A. Larue, professor of biblical history and archaeology, University of Southern California
David Marks, professor of psychology, University of Otago, Dunedin, New Zealand
Joel A. Moscowitz, assistant clinical professor, Department of Psychiatry, USC School of Medicine; director of psychiatry, Calabasas Mental Health Services, Los Angeles, Calif.
William A. Nolen, M.D., Litchfield Clinic, Litchfield, Minnesota
Robert B. Painter, professor of microbiology, School of Medicine, University of California
John W. Patterson, professor of materials science and engineering, Iowa State University
James Pomerantz, assistant professor of psychology, State University of New York at Buffalo
Robert H. Romer, professor of physics, Amherst College
Milton A. Rothman, professor of physics, Trenton State College
Robert J. Samp, M.D., assistant professor of education and medicine, University of Wisconsin-Madison
Erwin M. Segal, professor of psychology, State University of New York at Buffalo
Elie A. Shneour, biochemist; president, Biosystems Assoc., Ltd., La Jolla, California
Barry Singer, associate professor of psychology, California State University, Long Beach
Gordon Stein, physiologist, author, and editor of the *American Rationalist*
Waclaw Szybalski, professor, McArdle Laboratory, University of Wisconsin-Madison
Ernest H. Taves, M.D., psychoanalyst, Cambridge, Massachusetts

The Committee for the Scientific Investigation of Claims of the Paranormal

The Committee for the Scientific Investigation of Claims of the Paranormal has the following objectives:

- *To establish a network of people interested in critically examining claims of the paranormal.
- *To prepare bibliographies of published materials that carefully examine such claims.
- *To encourage and commission research by objective and impartial inquirers in areas where it is needed.
- *To convene conferences and meetings.
- *To publish articles, monographs, and books that examine claims of the paranormal.
- *To not reject such claims on a priori grounds, antecedent to inquiry, but rather to examine them objectively and carefully.

THE SKEPTICAL INQUIRER (formerly THE ZETETIC) is the official journal of the Committee.

Paul Kurtz, Chairman; Philosopher, State University of New York at Buffalo.
Lee Nisbet, Executive Director; Philosopher, Medaille College.
Kendrick Frazier, Science Writer; Editor, THE SKEPTICAL INQUIRER.

Fellows of the Committee:

George Abell, Astronomer, UCLA; **James E. Alcock,** Psychologist, York Univ., Toronto; **Isaac Asimov,** Chemist, Author; **Irving Biederman,** Psychologist, SUNY at Buffalo; **Brand Blanshard,** Philosopher, Yale; **Bart J. Bok,** Astronomer, Steward Observatory; **Bette Chambers,** American Humanist Association; **Milbourne Christopher,** Magician, Author; **Daniel Cohen,** Author; **L. Sprague de Camp,** Author, Engineer; **Eric J. Dingwall,** Anthropologist, Author; **Christopher Evans,** Psychologist, National Physical Lab., U.K.; **Charles Fair,** Author; **Antony Flew,** Philosopher, Reading Univ., U.K.; **Yves Galifret,** Exec. Secretary, l'Union Rationaliste; **Martin Gardner,** Author, *Scientific American*; **C. E. M. Hansel,** Psychologist, Univ. of Wales; **Sidney Hook,** Prof. Emeritus of Philosophy, NYU; **Richard Hull,** Philosopher, SUNY at Buffalo; **Ray Hyman,** Psychologist, Univ. of Oregon; **Leon Jaroff,** Senior Editor, *Time*; **Lawrence Jerome,** Science Writer, Engineer; **Richard Kammann,** Psychologist, Univ. of Otago, Dunedin, New Zealand; **Philip J. Klass,** Science Writer, Engineer; **Marvin Kohl,** Philosopher, SUNY at Fredonia; **Lawrence Kusche,** Science Writer; **Ernest Nagel,** Prof. Emeritus of Philosophy, Columbia; **James E. Oberg,** Science Writer; **James Prescott,** Psychologist, HEW; **W. V. Quine,** Philosopher, Harvard Univ.; **James Randi,** Magician, Author; **Dennis Rawlins,** Science Writer, Astronomer; **Carl Sagan,** Astronomer, Cornell Univ.; **Evry Schatzman,** President, French Physics Association; **Robert Sheaffer,** Science Writer; **B. F. Skinner,** Psychologist, Harvard Univ.; **Marvin Zelen,** Statistician, Harvard Univ.; **Marvin Zimmerman,** Philosopher, SUNY at Buffalo.

Affiliations given for identification only.

Committee sections have been established in Canada, France, Belgium, Germany, Great Britain, and New Zealand The Committee has UFO and Education subcommittees